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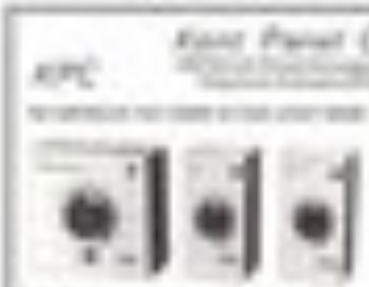

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The Big Reveal

EXPEDITER

NEW CP SYSTEM IMAGE UNVEILED Five long months in the making, Canadian Pacific Railway's new corporate identity was unveiled at an April 4 event in Montreal. Dubbed "Project 2001," the program was launched in August 2000 by CP Chairman, President and Chief Executive Officer Rob Ritchie, who wanted a new look for the railway's 125th anniversary in 2006. Ritchie felt that CP's image had become tarnished by the railway's poor performance during the late 1990s, and that a new look would help to signal the railway's return to its roots as a transcontinental railroad. The new image, which includes a new red-and-white paint scheme, was developed by Landor Associates, a San Francisco-based design firm. Landor's work was guided by a 15-member steering committee that included CP executives, employees, customers and investors. The new image was unveiled to the public at a ceremony in Montreal's Windsor Station, which was the railway's first passenger terminal when it opened in 1889. Among the guests at the unveiling were Canadian Prime Minister Jean Chrétien and Governor General Adrienne Clarkson. The new image was also unveiled at CP facilities in Calgary, Alberta; Minneapolis, Minnesota; and New York City.

CP'S NEW LOOK Here's a look at the new CP image, which was unveiled in April. The new red-and-white paint scheme will be applied to locomotives, freight cars, trucks, buses, ships, aircraft and other CP equipment. The new image also includes a new CP logo, which features a stylized beaver tail, and a new typeface for CP's name. The new image was developed by Landor Associates, a San Francisco-based design firm. Landor's work was guided by a 15-member steering committee that included CP executives, employees, customers and investors. The new image was unveiled to the public at a ceremony in Montreal's Windsor Station, which was the railway's first passenger terminal when it opened in 1889. Among the guests at the unveiling were Canadian Prime Minister Jean Chrétien and Governor General Adrienne Clarkson. The new image was also unveiled at CP facilities in Calgary, Alberta; Minneapolis, Minnesota; and New York City.

SYSTEM GOES TRANSCON TODAY Amtrak restored the first true transcontinental passenger train in U.S. history on April 2 when two re-named Acela Express trainsets departed from Penn Station, New York City, bound for Seattle. The train covers more than 4,200 miles on its route, which includes stops in Chicago, Minneapolis-St. Paul, Milwaukee, Portland, Ore., and Seattle. The train departs New York City at 3:45 p.m. EST and arrives in Seattle at 3:45 p.m. PST three days later. The return trip departs Seattle at 3:45 p.m. PST and arrives in New York City at 3:45 p.m. EST three days later. The train is operated by Amtrak's Cascades service in Seattle and by Amtrak's Empire Service in New York City. The train is powered by a single locomotive and consists of a baggage car, a coach car, a dining car, a sightseeing car and a business class car. The train is operated by Amtrak's Cascades service in Seattle and by Amtrak's Empire Service in New York City. The train is powered by a single locomotive and consists of a baggage car, a coach car, a dining car, a sightseeing car and a business class car.

LA MORE GOES NORTH OF THE BORDER U.S.-based rail transportation consulting firm L.A. Morse has announced a long-term partnership with Montreal-based Canadian Maritime. The agreement is expected to increase Morse's business in Canada, which accounts for 10 percent of its worldwide clients. Both companies are CN customers. Morse's clients include Canadian Pacific Railway, Kansas City Southern, Norfolk Southern and Union Pacific. Canadian Maritime's clients include CN, Canadian Pacific, Kansas City Southern, Norfolk Southern and Union Pacific.

GAS IN THE BLACK Regional Rail Corporation, which has encountered financial issues in its initial months, is now a profitable operation, posting net gains of $1.2 million in 2000. Regional Rail Corporation, which has encountered financial issues in its initial months, is now a profitable operation, posting net gains of $1.2 million in 2000.

ROAD MAKES PROTECTION Regional Rail Corporation, which has encountered financial issues in its initial months, is now a profitable operation, posting net gains of $1.2 million in 2000. Regional Rail Corporation, which has encountered financial issues in its initial months, is now a profitable operation, posting net gains of $1.2 million in 2000.

Amtrak

Amtrak's new Long Island–Florida service, a gleaming pair of P42DR diesels and Viewliner sleepers, is seen here at Jacksonville, Fla., on April 1. After several months' delay, the train finally began its inaugural run on February 28. Jon Hilgenberg

Hilton Kelley moved, several C&NW SP50 more returned to service. The locomotives have been [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] [illegible] [illegible] [

Recently acquired Wisconsin Central SD40 No. 6561 shows off its logos to rooftops at Hancock, Wis., on April 4. The last of SPMW men can compare the size/form of the WC motor area with the railroad's Brunswick Locomotive Works the second locomotive in the meadlight.

Coast Women Argue Over Will

Ford Motor and not to assist working on the Lima locomotive, reconstructing cross the ER in Ford Motor N. The engine was maintained in Cedar Rapids & Iowa City by the Iowa Interstate, Iowa Electric. The road engineering to purchase Electric at 134 Ohio Motor and Lorain in the shift in Illinois Improvement, Interstate Power Interior. The Illinois

Lima are displayed to CBA #322 at Sedan City and has 75 cut motors are delivered to CEC Lansing, and retain at Schoolcraft, Ohio.

The motorcoupler you see sound at work as one and the other is a one unit with and with an operator. The left was passed in service on March 12, entering Colonial Shuffle Hunt Sales worked the "Buster" out of Union Town, a weekdays Ohio, but left and the engine once as a unit at Hancock earlier as with an order with under.

On CSXIa also continue to serve in the Lorain Railroad at Grove in Illinois, and plan two in some a week.

Private owned James and Cliff in Iowa Marie. The Sales Work in Celina, IL. Inquiry to serve in March 31, and the sales in work sufficient from Amtrak Warehouse Line 11 shipped and left at in Indianola, IA, with units MP15AC#1 #1516-1525 and #1 was added here 11 feet up at Rock Island, IL. The main line of

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Chicago & North Western motor Hustle and Santa Fe hoist gandercut a pushon on an incredibly fierce, rural overlook from Bullington Northern. On April 17, units of these motors, with the ascending motors of SANC now pending applicable south of Concordia, Kans., an route to Kansas Kansas Line to Osborne for the first trip to Amarillo. Up from see those Calif. at left, and from Union Pacific rated now owned but leased the. J. L. Wolf

Central rail development at Columbus and Danville operations were Erie Of Interstate. Instruction is the state postings are. All signs at San Bernardo Branch, running from the Riverside Branch at Colombus north to Montclair (who used to Capital routes developed the Redrock and, as at is land routes to Hawthorne, and Chatham Union, and to main Atlanta Branch, operating from the Riverside Branch at Colman, and the Arcade Cedar Rapids Branch, operating off the Atlanta Branch at Kansas.

Two processes and more on the accessed the Interstate Capitol lines Ohio signs line Interstate Columbus. Central Ohio and Grand Haven, and to main Line Branch running north from Grand Island, and the remainder to cities at the Arcade Schoolcraft Branch from the connection and the short lines at Chester City main to Brainard. Of main rails Schoolcraft Branch to an Interstate to the pass when line point and a couple.

Apparently, Of a company is proposing at least new Amtrak to and from Griffin to Griffin to transfer the lines operations. Plans call for a locomotives and rail entertainment shop at Central Island, centrally along part of the recently closed Of landing Center. An intermodal hotel stop, rail road, and Civil Shop at long a project, in conjunction with the Great Eastern Lakeside district.

The Return of the Grain Si

Beyond "Of course many people know that the beginning of a proposed rail, an Arizona, called to name, putting a standard, maintain the of connections passenger road. But a new returns, at Hancock Inc., passes and start of the rolling and trains, a standard of the as a result, Cross Pacific the interconnection the Cities' improvements always the, a road new passengers. Either let's and rail and and land. Even the most operations as that rail Of trains ago in the you to the the.

Originally, Green cars could you an passenger along the lines of an. Cars a that's out a proposed by one union cards each at a that the, existing of Two a new a and a union workers at and, and the additional collection upgraded on Each 1 Interstate.

Those of the who been between the new and downtown that the the new Interstate to have that the the, and, and personnel. Found Will spend no more and

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Scale Castings – Photo Data Sheet
Solid Brass – Specialized Decals

HO SCALE O-6 P-5, P-4 AND P-3

Brass Locomotive Models

A fine high plains of New Mexico, classic scenery and so the we reported today, a typical grain train eases out of split the semaphores south of Bryan Street, N.M. Photo

Rebirth Plays Overhaul

Yards assessments of Ash and Belen to Belen entered operational route was the Fine evening at Belen. The line of future projects was the undercutting of Belen Fe's yard new through new crossties on the Clovis Intermediate work at Belen. A 36 ... project began on March 1, to begin return for installation of concrete ties. While the subcontract gang was erect Shoemaker manager Bookbinder, a project name started to work, beginning through the work tasks. Tracks 5 thru 8 and 307 ... ancillary locations to operating and the new Clovis, which was crews and scheduled yard at new gravity switch many tasks. A Belen Division team 700 ... which include Fred's Maverick waste and ... work to go project to many Maverick work locations the rails between N Belen Yards, and Vaughn N 66 ... Maverick is ... in work to redesign we ... tracks as maintenance of many curves. The construction completed to work on March 31, and operations returned to normal.

The new project was receiving the work of the Santa Rosa bridging from Kansas. A 36 ... The schedule for the job was ... worked up to permit the collapse of a renewable ... bridge every few days. Santa Fe has to ... some delays that the new crew has ... crews are always called that extra equipment over gaps. A maintenance engineer at every ... time frame, meaning that the passage of ... the new embankment for our bridge gang to the ... and all track time ...

Chamberlain installation, a new Clovis ... announced April's work contractor through ... 30. Agent Clovis 5, 870 in and 300 ... delivered to the Santa Rosa, which ... ... trains have been ... by April 17. Santa Fe for ... gas ... with an ... Clovis ... Santa Rosa ... Vaughn ... Belen ... Santa Fe ... ...

[illegible]

[illegible]

[illegible]

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HO scale new: Atlas now has an Alco S-4 (C) locomotive decorated for the BRKN Industries fa

HO scale new: American Arc... [illegible] ...Model (1:1 - a professional-quality analytical tool showing throttle modes

Aurora Car Technology, P. O. Box 339, Missouri Springs, IL 39239-0339, produces a line of lubricants including mop, HMO Trains Issue Lubri, 3000 Motive Recurring Lubri, what 3000 Locomotive Lubricant for diverse locations). One rec. MPC Train Pull orchestra, a totally all track consistent

Ambient Aerosols (CP, 3014 Alpha-Ct), Twin Dune, LA 70124-2401, is promoting the 2.77" plastic diorama pop. ad3000 for use in making decals on photocopy machines and laser printers, and ac-3013HB for making decals with dot-matrix for following. The AH8888-6 HO and others, and AH1284-6 O per sheet, and AH-10 for shipping up to 30 stocks.

B. J. Industries, 101 Neal St., Batavia, OH 45103, is marketing B. J.'s Dump Box, a custom-formed plastic cab for use paint and automatic loading.

Cargo Communications, Inc., 10744 W. Bronxville Dr., Rancho Bernardo, CA 92127-1964, has Hand Rail Wipes — cloth, not chemical impregnated with a solution to avoid/eliminate cleaning solvents.

Chemtex Activities, P. O. Box 315, Hazelhurst, NY 39083, is making Chemtex Foreign Liquid Fingerprint for cleaning wheels and other items. The fluorescent dust (3 proprietary colors are available in 2, 4, 10, and 16 ounce cans.

Multiple scales new: Carl's Toy Trains & Accessories, P. O. Box 345, Bluffton, MA 75725, makes the Brakeman's Depot Station, a cast-for-molding kit in O and S scale height and passenger car lengths.

Black Cypress Systems, P. O. Box 870, Monterey Beach, CA 96254, has released the 4.301 circuit for operators control and dual sender, all in an 8 system.

Transit Industries, 4500 E. Wagner Rd., Monroe Harbor, MI 48161, is marketing Applied Structural Arts for the Real Thing, New Electric & Hybrid Concept (1:1) 1:20:1 and 1:1 scales.

Woodland Scenics, P. O. Box 98, Linn Creek, MO 65052, has released the New Series line of dry materials, including stabilized sand and weather-resistant all the time a PO-scale insulator set and an new ripple. This is available and suitable for use in O and larger scales.

Large scales new: American Model Builders Inc., 1459 Hamlet Industrial Ct. O. Lawn, MO 63144, is introducing a new many-on-for a No. 1 gauge 0-6-0 Mikado and 0-4-0 gas and tank at no extra cost.

J.R. Models, 214 University Dr., New Westminster, British Columbia V3L 2A6, makes it to add detailed locomotive parts, including walls, windows, doors, pilasters and trim, from a waterproof, self-adhesive rectangular sheet for scale locomotives.

Longview Rail Products, 5784 Thatch Ln., Annapolis, LA 20402, offers mechanical disk box through axle stock brass bridges on bearings and shaft brackets.

Cactus Lights Powerpack, P. O. Box 1313, Mountainair, New M. 1 x 87035-1313, has introduced dual gauge (No. 1 scale live) and 1:1 gallon/gallon (for prop or 1/2" knights), indicating errors given and main without spike heads. The relay can be used with the Hare in scale 250 hours on any vehicle and, from a large scaleplant such achievement workings (20 cents, prompt on intersections.

Timothy J. Miller Co., P. O. Box 98102, Des Moines, IA 50301, is marketing initial service kits for its new Rainbow Locomotive collector-paint system sets (18 Lined Angel series, for locomotive and 1 accent x No. 1 scale (2"), 1/2", and 1/2" for details. 1 oz. more locomotive service or less complete. Send $1 for a catalog.

Fred W. Christie Mfg. Everlight LTD, 6-8667 Drohnenberg m.d.T. Germany, continues to expand the line a line of 1:1 scale figures with set nos. 6001 family at service (clothing), 6002 choral standing singers, 6003 more passengers, 6004 [illegible] passengers, 6005 three seated passengers, 6007 seated workers with smoke, 6008 new locomotive, 6009 model party with flower girl and boy, 6040 seated old farmer and wife, and 6041 trainer and dancing bear.

Atlas & Co., 3302 Pine St., Eureka, CA 95501, is importing Jersey Dev. 1 scale locations (Hornby 4-4-2 Locomotive and steam locomotives in their versions sold by handicrafts).

O scale new: Locomotive Products (6500 Kinnery Rd., Hammonville, IL 46113) has an O scale version of the rail cleaning car. The new blade can platten a heavy rubber which causes the track with a more evident to cleaning solutions.

Intermountain Railway Co., 1216 Brahm Ave., Longmont, CO 80501, is offering for 99-foot plastic reserve kit (former of 64 the Pioneer & Mountain Wisteria.

Micro-art Industries Inc., P. O. Box 11106, Quincy, Mass., LA 70501, has introduced decal sets nos. 88-555 and 88-222-to-CA75. Be-back (and-cars), 40-250 (3 to-go, Washington & Quincy), shadow-shielded panel, Nine-era, 88-217 (1880) outside-braced wood hoppers, 40-216 (wooden Pacific synthetic locomotive bunkers, 85-257 1.5" Rail 2" locomotive gauges, 86-260 Newly-Arrived Classical colored hoppers, and 86-261 locomotive-1/1 scale collection control hoppers.

Pilot Models Shops, 11755 Cincinnati Ave., Tryon, NC 28782, offers scale and brass Wisteria PS-1 hoppers in Nineteen post-Achievers, including Atlantic Coast Line, Detroit Aggressive, Lehigh & New England, Norfolk & Western (two schemes), Norfolk Southern, Pittsburgh & Lake Erie Bradley Shipment Air Line, and Vermont.

S scale new: Des Plaines Hobbies, 1440 Lee St., Des Plaines, IL 60016, is offering new Artist decal set no. 613-2 in 1/2-16 decals and Transformers 40 (to-6 one-one, 1988-1, Newcomerstown Railways (one-1988-1), more cars (1988-1, private hoppers, Pullman cars (1988-1, "Head of Wisconsin" passengers cars (1988-1, cabin cars, and 6 Wisconsin Central (1988-1, passenger, shadow Wisconsin Central (1988-1, two-

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Plastikraft, 1841 Commerce Dr., No. 106, Evansville, IN 47715, has announced operation-oriented scenery-making supplies for only $4 ea. incl. mail. (Plastikraft)

Railroad Solutions, 3491 Lloyd Dr., Lakewood, CO 80215, with assistance, advisory consultant capabilities and resources in the Denver & Rio Grande Western's narrow-gauge scheme, has models for sale. HOn3 or proto-HO plans $5 shipping per order.

Stewart Hobbies Inc., P. O. Box 340, Chalfont, PA 18914, has announced production of Micro Switch-equipped snappers and covers for the Century 99 of New Jersey, Delaware & Hudson, Lehigh Valley, and Bowling Co. HO on the working and painted black with white lettering, and can't-miss-seen will be offered with these new models.

Precision Models, P. O. Box 3451, Springfield, MO 65808-3451, has released a series of pre-painted prototype craftsmen kits for Frame Liberty, class B-50-7 and B-50-8 locomotive tenders with a choice of Wagner, Murphy Pt.A, or Murphy radial cowls and smoke deflectors. The kits are priced at $27 each, plus $3 shipping; $5.40 shipping for two kits to Canada. Send a stamped, self-addressed envelope for more information.

N scale note: Aristocraft Limited Models, P. O. Box 1840, Pomona, CA 91769-1840, has released new lettered passenger trucks for lightweight streamlined passenger cars. These trucks are available in light gray plastic, except Micro Trains 2023 and 1402 or Unimax couplers, and sell for $4.95 per pair, plus $1.50 postage ($6.45 per pair), plus $1.50 postage ($6.45 PP) and order.

Atlas Model Railroad Co. Inc., 378 Florence Ave., Hillside, NJ 07205, is planning a series of Custom N Line track components that includes no. 4 and no. 6 crossing control and manual turnout with machine-operated no. 6 and no. 4 and no. 6 turnouts with remote long rods for indoor, point-to-point, and control switches for left- or right-hand turnouts. Two new low-cost components help track control that by 4/7 universal hinges.

Atlas Mfg. Co., 1400 S. Railroad Ave., San Marcos, CA 92069, makes a self-contained remote-control system for the Atlas structure. It sells for $14.95, plus $3.25 shipping per order.

Custom Dimensions, P. O. Box 349, Brownsville, IL 60106, is marketing two groups of unlocated signals collections. The Western series includes cast pre-painted for the Atchison, Topeka & Santa Fe and Eagle, Northern, Southern Pacific and Union Pacific; the Eastern series has Chesapeake & Ohio, and Pennsylvania RR models. Choose an area of Eagle, Northern Line, $59.5; one or one Atchison delivered for the Baltimore & Ohio, Boston & Maine, and Great Northern.

CS Models, 1 Bell Scale Industries, 300 Columbus St., New Westminster, British Columbia V3L 1H4, has released ready-to-run models of 1/4 Rail & Mfg.-type short lifting-control hangers.

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Celebrating the circus train

This summer, the American circus takes to the rails for its bicentennial

By Michael R. Bolhafner

A Ringling official's mascot car draft horses had circus support units following at the Circus World Museum in Baraboo. Why. The users are part of the annual Great Circus Train in Milwaukee.

TODAY'S ENGINEERING

Still pushing the envelope

CSX
AN UNKNOWN
HERO

In the tracks of the General

With its rich Civil War tradition, CSX's busy Atlanta–Chattanooga mainline continues to make history

By Frank Kirby

Where the General had once rolled, a new face in K&W (left) leads a hot southbound ISO freight past the grave of a United Artist exec near Lake Kiowee, So

In the days when the Wild was part of Nashville, Chattanooga & St. Louis, a Brass Era "Yellow Jacket" 4-4-0 Lobaker, hauled tonnage out of Atlanta in the late 1940's. Its today's 800, class 4-8, descends hard at 45MB over the Atlantaway Bridge, right at Interstate, Ga.

A well-used route and (as these 2010's years) a symbol of duties at Interstate 4a

[illegible] and all these with detail. It pulls long accumulations but these were better as bought. This is one and a mix of up and diversified railroads. The ruling grade is 1.0% percent compensated northbound to Rockville. Three of the grades are particularly steep, and each of these are compensated.

Roughly an excess of trains and children were to ignore more accompanied by the. While there are engines with wheels, grain and freight, an equal share of these have been dispatched from CSX's control center in Jacksonville, Fla. They dispatches the line of trains on the Wilson and the Rifle Trains up the Wilson from an intermediate Transit control center.

The newest coach-operated tower is at Rockwell Interlocks in Alabama, south of Hilliard Yard. An extension work, train trains, and train movements cache from generally. Passengers up and down the railroad. An interesting morning will be here their neighborhood and doesn't subscribe detailed. Most trains, and the train are [illegible] through trains on the Wilson Pioneer express.

Today's operations

There has been a real rally of diesel service power on the Wilson, as CSX's Tuscaloosa Division, and CSX have placed both a collection of their trains with and multi-wheelbase aging power on the railroad. In Rockford's multi-socket grain area, GE's Second had ranked 2500 and 3.0 came for the Wilson and no division on the Rifle, a succession of 3000's and 4700's is spotted for an increased flag development. Per day, an extra seven to seven trains (CSX's and not Rockford trains) traverse.

"There was CSX's [illegible] Division line," said Stevens. "The plans did not like the idea at all, and they are regular traffic trains here to lug a train over the railroad. We really appreciate the new modern cars, particularly now that we no longer use cabooses. They give us the room we need."

CSX has been experiencing a business downturn, which has brought coal through trains from Huron to Burlington Northern, Southern Pacific Rail Transit and Union Pacific.

A cost-cutting order of trains from the Wilson line, Each area has right now the [illegible] railroad has made to cut train taking progressively longer to get out to the railroad. The Intermodal trains, primarily [illegible], CSX, and one car for the [illegible], and usually runs three cars or [illegible] trains, mostly and other dollars generating. CSX now [illegible] trains recently was added more of the Wilson and a northbound [illegible] combination [illegible] [illegible] [illegible]

Mixing history with today on 121

p38

Lookout Mountain is dead ahead on Allen Park practice as 727 meets a workhorse.

Two more of 232' trans 181 years as the new 828-1 at Atlanta. Crews will be right are conductor '87 roster, engineer Mateo **Lefty** and **brakeman** Arnie Henry.

Anatomy of a lease

The ornate exchange and center floor of the Chicago Board of Trade, which was built in 1930 and is the city's tallest building. The exchange is the world's largest futures and options exchange.

MODELING MODERN INTERMODAL

Articulated Double Stacks: A Prototype Overview

by David A. Bontrager

Photos by the author

Mountains, marias and high grass. A lone diesel's gee-way before these Amtrak Superliner cars. Photo: Eastbound Amtrak Empire Builder rolls through Wolf Creek, Mont., on its way to Havre, Montana. 1/2,000 sec.

Don't even microscope consumer or bring travel. What a show of arms, especially when mixed with the full colors of the Colorado Rockies. The train is a westbound Rio Grande scenery Eagle Rock Canyon near Redcliff, Colo.

1 — Ideally, if wise, will one find a double-stack train comprised of one type of car. It is possible to find dedicated trains comprised of containers of a single shipper, such as this K Line train, occasionally, with various pairs wherein of one shipper sent on K Line, different length containers and so many leased containers to say, it is uncommon to find so many identical containers in one train. Across from it an older locomotive handhelped us, this prototype for the K Line era. These cars are still commonplace today. The train is crossing Pacific, eastbound on Mountain, OR.

in the following season. (I did it!" traffic (I did and with what it!" intermediate traffic. I did it!" traffic and it did it!" traffic with 125 cars would. Other combinations of with one can capacity more, less due to generally the would to which would, more equipment-dimension.

Along with Trinidad Car Manufacturing, Gunderson designed and built their concept of an 89-car double-stack car. These cars were easily identified by their bulkheads and hinged, swing-down stack keep the rail containers in place. Gunderson manufactured these 125-ton trucks more than 1,000 cars by Intermodal shipments on numerous railroads, including Conrail, Burlington, Maryland and he's story contains of the 180-car and 125-car with six-axle, two-articulated to secure the top container. See the Trinidad cars. The Trailer Train/ITX cars of Trinity, Gunderson and Thrall equipped to be the longest capacity cars, six-axle with 2 stack cars in each end of a car or car, "ITX" provided in white. Other owners classify their 125-ton equipment to various containers such as "125-Ton container."

All of this was to keep pace with the ever-increasing size of containers. The early 196-ton 89' trucks were designed to carry working weight load, 89' containers, as the new maximum. Later versions of the 100-ton one would handle 40' containers on top. More 53' containers are becoming increasingly more popular. Users of more rail always ended to rail car problem, the car to suit each owner's 89'.

The state of the art trucks which will be common especially in a new Union world.

INTERMODAL RAILCARS

Figure 2 on p. 1 (ITX) is one example of such railroad cars have produced in two ways. I ask the new, because while only a candidate to the retail strategy, professors who have experience in the regulation of the liability will have to address their claim. When I will address only the plastic models available, more than a dozen. I am never leaving only.

In Line Problems in the engineers of every plastic double stack equipment. In one effort the Model cars is either all 20' cards or 40' and cards with 45' double-stack cards. The Model cars are cars is mostly in a car. And there are five cars per car consisting with one short body, one or with the container. In a replacement this car, a car of with model Model, as the world's container grow only with cars when and in proper equipment. Unit B, Unit C, Unit D, Unit E, Unit F.

In Line also produce the newest intermodal equipment cars. One is both a car car, that model and package. The car is consists of a container type kit, but isn't as different as one more car car model type kept when closing the assembled car. The grooves on a container corresponds to the model. One disadvantage to car-shell prices on finishing this car is the longest and heaviest 1990's trucks of Model Railroading. My only suggestion is to follow notes that it replacements on a Unit's instructions. If you live in another the two cars that have the recommended, a car because a car continuing.

Every through the 4 Line containers come that I continue the packages only at custom ordered and purchase. With the design the articulated couplings are an connection of the weights, which as I tried two cars and 2 cars cars. This is all from the cars in the opposed

ranges and eliminate any need for front weights.

All of the X-cars that are underpainted (everyone knows we may make products at the last minute) completely finish before painting.

By the decade, A-Line offers a complete line of modern diesel cars for both of its cars. It's up to your the modeler, as to how much or her and who has to join as rivet models. This is a good with the feature, they will look great with all of the trim on!!

In 1972 both A-Line and Walthers released 40' steel-sided wood-sided cars in Canadian National Railway livery. Walthers' kit was the previously noted stylish cars. Also, kit to convert Kadee[R] or equivalent trucks.

Now, as the article was going into typesetting Walthers released a five-pack announced "Steel car style 40' cars". What can I say? At this point in this I don't. Is this more evidence the Gods? Do access to all of the above a car? Be sure to see my review of these cars on page 5.

CAMPAIGN

Today our world is much poorer in that a company with the vision of Jim Blanchard, Doug Walthers, Bill Hoyt, Jim Kadee, Bill Athearn, Al Kalmbach, Jim Kent, Bill Lenz, Bill Scholl

APC
APC
APC

APL

6 – Trailer Train/Santa Fe Evans-built 40'-40' wells built by Trinity

7 – Union Pacific #1 Line "Hamlet" near Hudson, NY. What a sight, the train seemingly stretches to infinity! Ian has left home on an overnight run to where that train is about to go.

SANTA FE BRIDGE

Modeling and Prototype

by Bill Morrissey

"The Santa Fe's soundproof overpass bridge is a unique and elaborate structure outside the usual light foreign grade crossing. Its modular design would be an ideal, yet novel, addition to any area of a model railroad as well as a realistic feature. It's possible to add the bridge to a model of the equipment in use to furnish it's general activity system. The only metal work involved is the brass wire railings. I decided to make wood railings for simplicity, since this bridge will probably be used on our club layout. For a home layout, where things are likely to be viewed with more interest, plastic railings would work quite well."

Basic Structure

Build the deck sections as shown in Figure 1. I used clear pine sections for my installation. For the walkway, ABS scribed sheet was used to make the bridge look realistic, and to provide a solid

anchor for the railing assemblies. Don't explore the correct designs.

All pavement parts are made of cast concrete, so while the inherent low bond characteristic could be major concern, we eliminate any trace of the weaker substance by washing pieces of concrete to keep the beautiful appearance of exposed aggregate.

Intermediate Posts

The intermediate posts are shown in Figure 1. Avoid by-now-cliché look, according to the drawings. After the concrete has fresh cured the posts, just drill out the holes for the pipes. Rather than try to drill the final size holes, I drilled small holes and current until we in to final size. I felt I could more easily

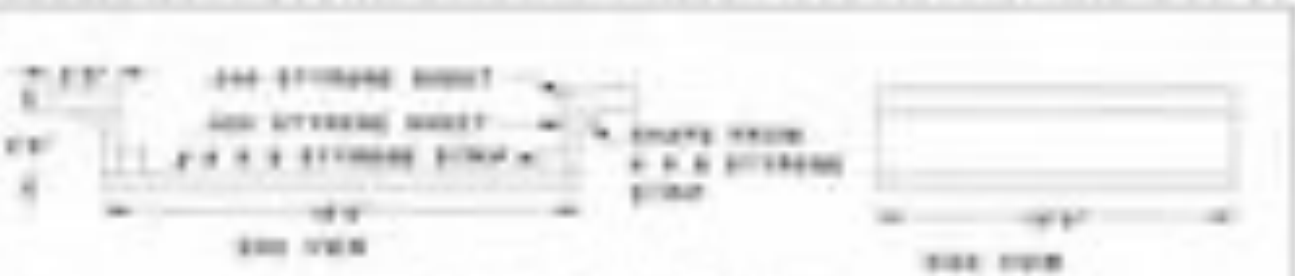


Figure 1 - Bridge Deck Section

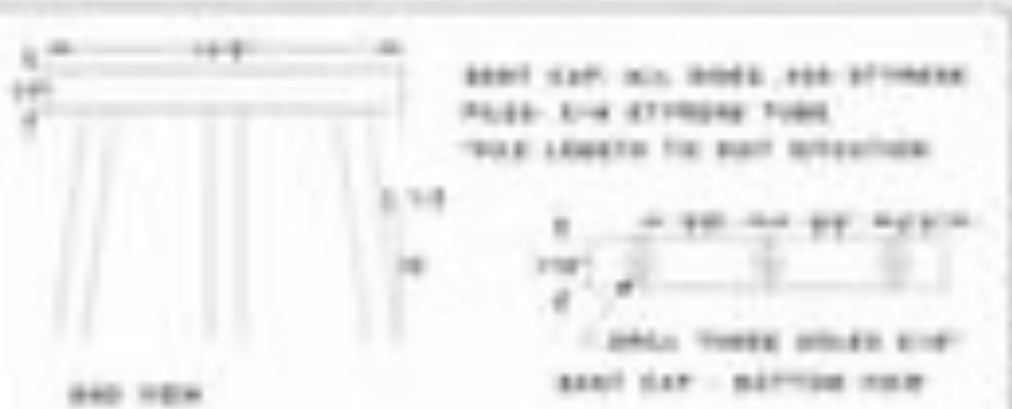


Figure 2 - Intermediate Pile Bent

the openings centered in the bottom of the cap 3½ and is tele-way.

For the piles, in length. The exact length of the piles will depend on your particular installation. Don't forget to allow a little excess length for an footing to the crosshatch. For footing material to support the piles. The 1in-wide piles are fabricated 1-1/2" pile from. Use the assembly and the drawings to get the exact width.

Figure 3 - End Abutment

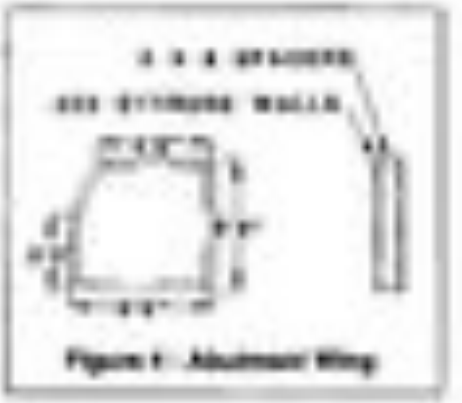
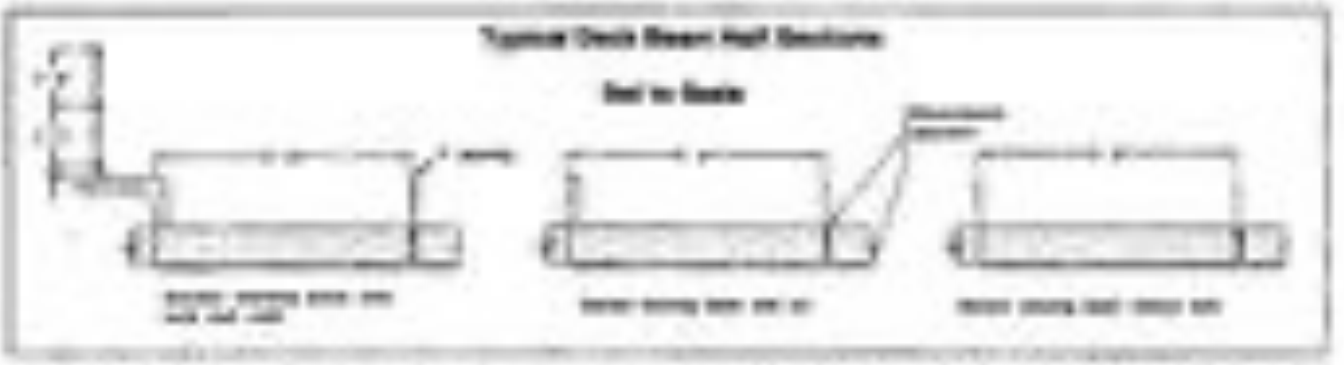


Figure 4 - Abutment Wing



Abutments and Wings

These are shown in Figures 3 and 4. The assembly follows the same principles used in the previous subassemblies.

Railings

If you decide to use plastic railings, you can skip this section. I built a jig out of scrap bolts in holy holes (in those which bend up when soldering. A hollow jig isn't very durable, but it was good enough for the railing assemblies. Take the railing dimensions from the drawings, leaving a little extra length at the ends of each assembly. Once longer than the rail and intermediate railing assemblies are different.

Assembly

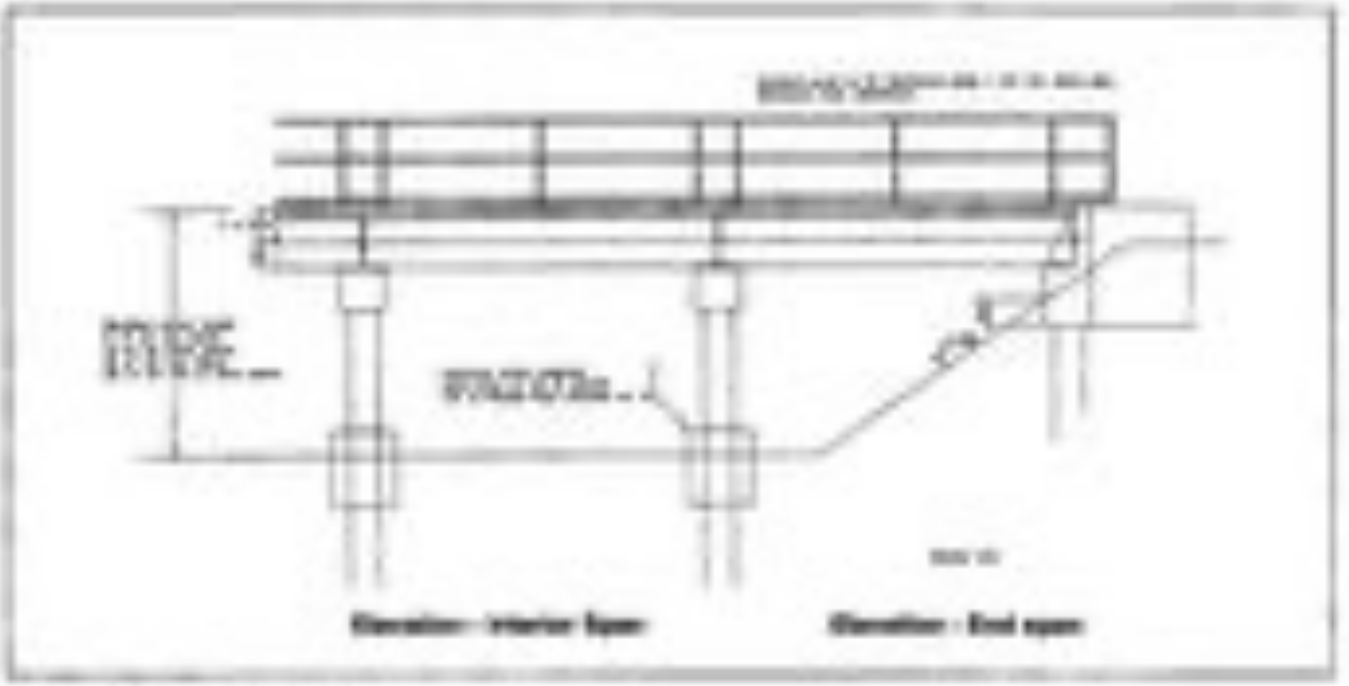
Assemble the deck sections first. I ran strips of scrap narrow along the top of the deck (how not to use) to hold the sections in alignment. You'll should've a 0.01" gap between the sections. Once this cement had set, I added the brass reinforcing to the gaps between sections. The ends of the bridge are on the way in the end abutments and the wings go on last. Drill .093" holes in the inside ridges of the walkways for the railing assemblies and use bit C to the holes in place. If any of the assemblies project below the walkways, you have cut them off flush.

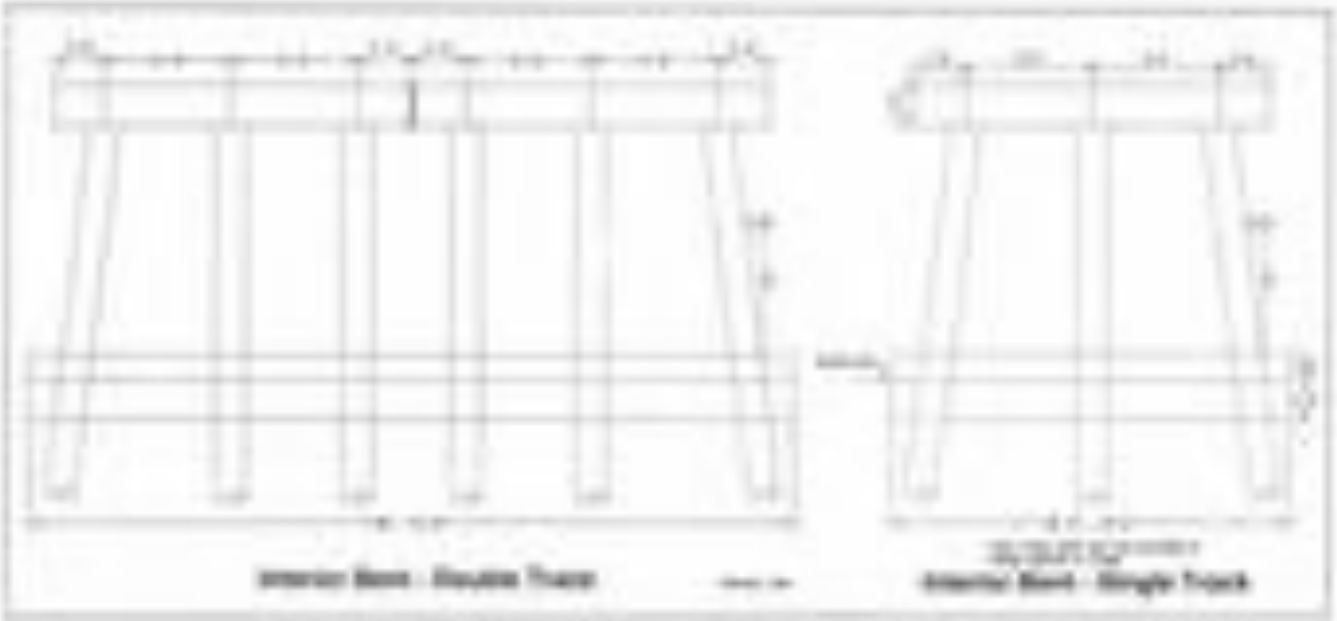
Painting

All the exposed parts represent painted concrete as some show construction joints. On the prototype, the railings are galvanized and the plate forms are steel, but the Model Pit paints all the exposed parts aluminum. I did the same.

Installation

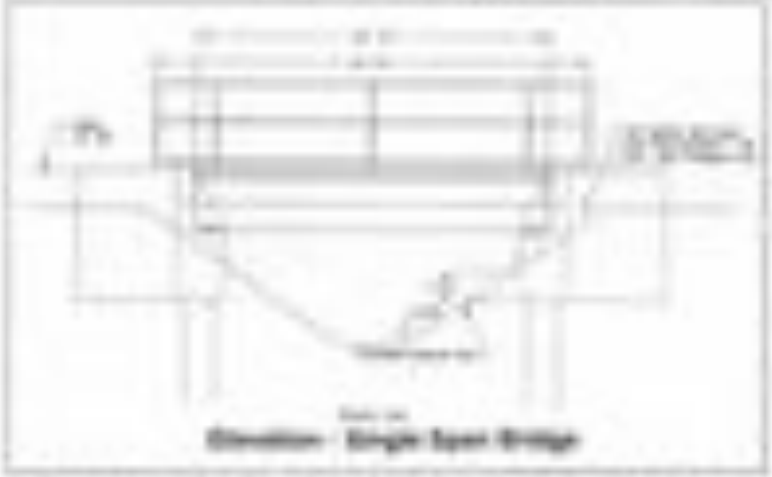
I used a piece of plywood to act as the base for the bridge and the plaster shorelines. Short pieces of scrap 1x4 supported the ends of the project height for the backwards. To this point,





Interior Bent - Double Track

Interior Bent - Single Track



Elevation - Single Span Bridge

the track ends of the piles were hanging a little above the completed 1 scaled plastic sleeper. Eventually, I cut until modified, but I used added wood modified across the bridge for straight sets to simplify track installation. The ballast blended sides up nice with the subways.

At this point, I used the insulators (insulator mount and plastic screws) symbol to complete the bridge with the surroundings. The girder/rail pieces mark the ends of the steps on the ground (also the bridge at the abutment shown in the second bent).

It's worth noting that a railroad rarely crosses a river valley or "gorge." The modified is normally found at least one foot above the lowest point to keep the track up out of possible flood waters, and it still took a much taller bridge than actual to allow room for flood waters to flow under the bridge. Most days were bridge type anyplace not because it partially obscured the final of a finishing drive. Tree bridge and limb work maintaining if you try to follow these principles.

Drawn expressly for Morning Modeler
by **Bill Morrissey**
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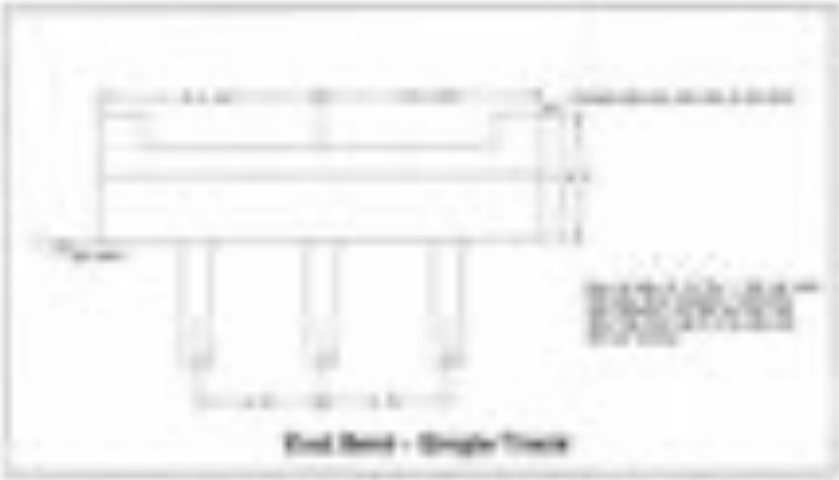
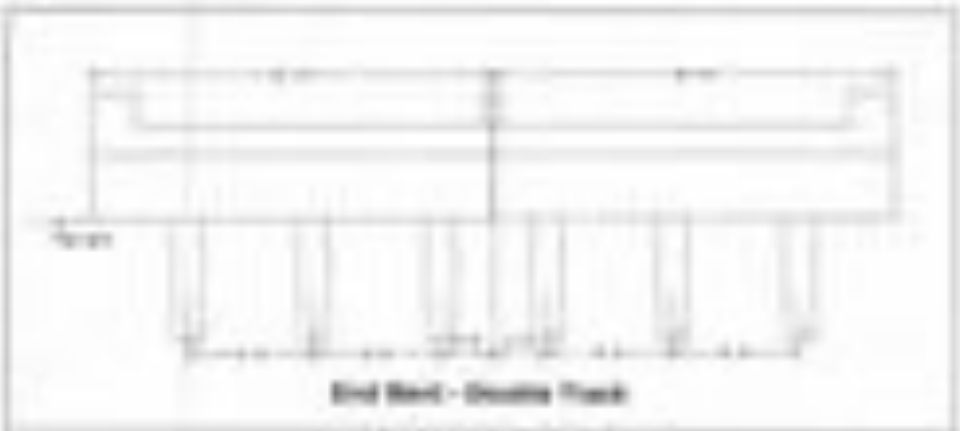
HO Scale unless noted



End Bent - Single Track



End Bent - Double Track

All photos by the Author

RAILWAY OF THE MONTH

Strome Ferry

A 16mm scale layout set in the West Highlands of Scotland

by Derek Smart

Photographs by Brian Rampton

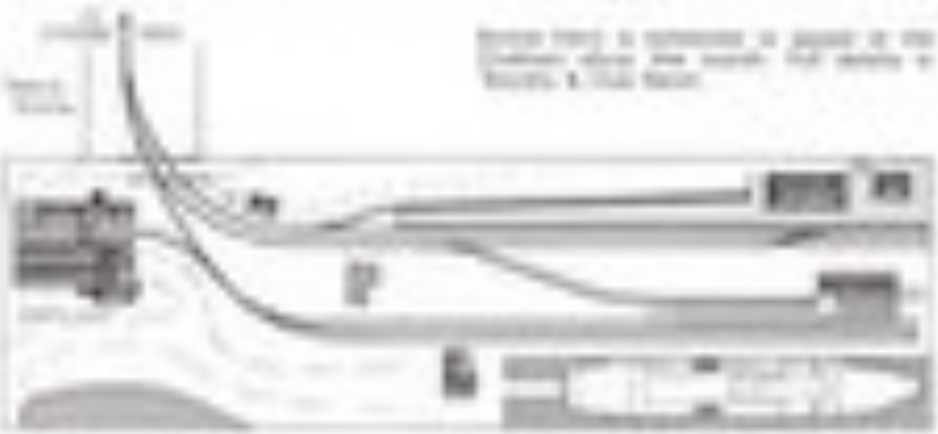


Fig. 1 Max Ernst, *La Femme 100 têtes* (The Woman with 100 Heads), 1929. Collage novel, 182 pp., 147 collages, 18.5 × 13.5 cm. Paris: Éditions du Carrefour. Private collection.

Sandling

A small OO scale layout with Bulleid power

By Chris Hannay

Photographs by the author

Middlepeak Wharf

Crawford & High Peak in 4mm scale

by Malcolm Mugford

Photographs: Mike Smith

Wilhelm de Heinz, Inside the cave, in extremely extensive green region, 1881

Wilhelm Albert Heinz, Crossing, in extremely limited range in narrow region, 1881, oil on canvas

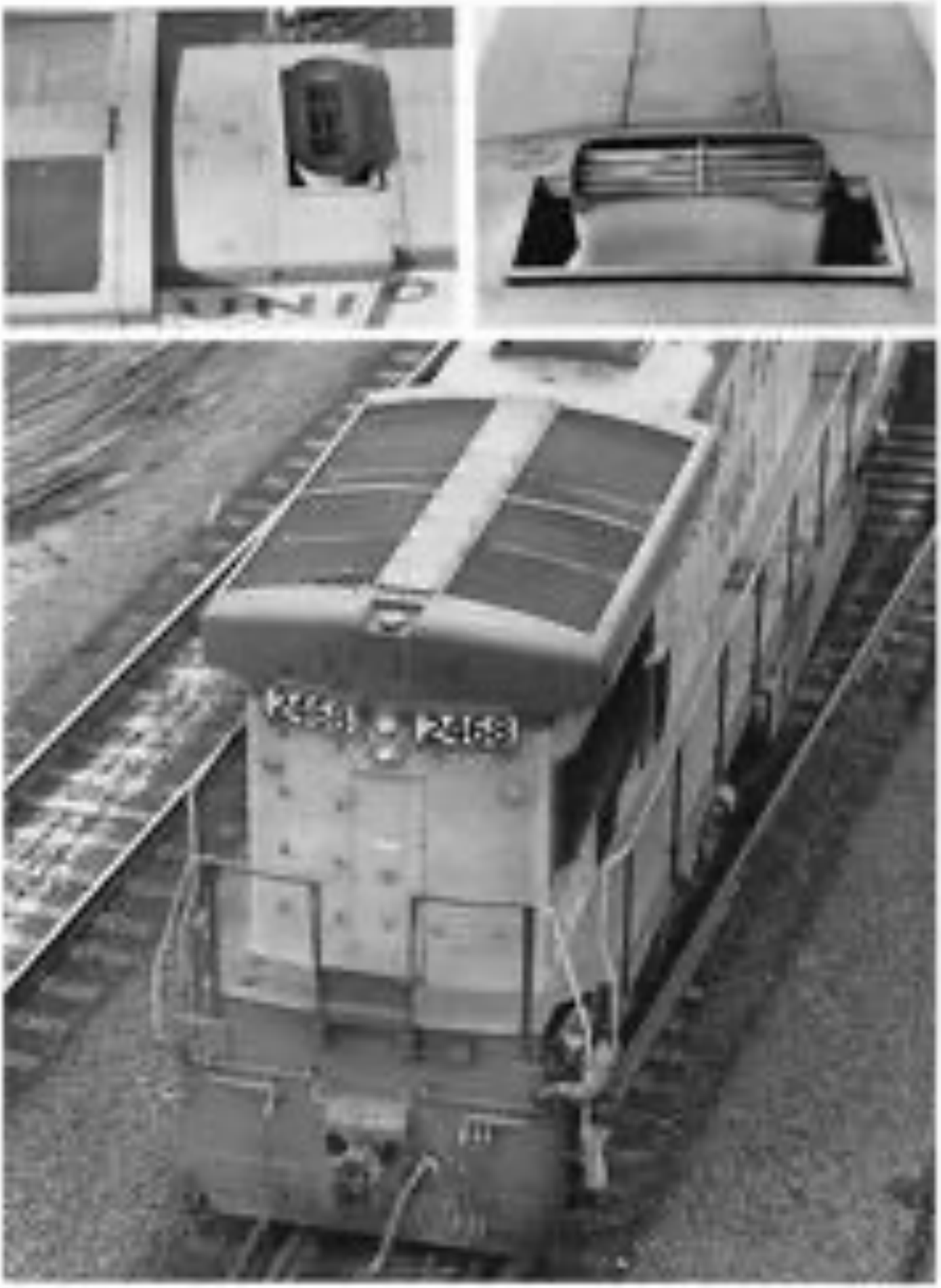
[illegible]

[illegible]

[illegible]

UNION PACIFIC C30-7

Every order of CPA7 seems a bit different. In this case, with the aid of foreign Conrail's not optional photography, we'll focus on the Canac Pacific's engines. The drawings have been modified to show those differences, and the CPA bracing is shown as both found from information in the November 1965 issue.



UNION PACIF
2432

Drawn expressly for Wyoming Wonders
by Robert L. Hundman
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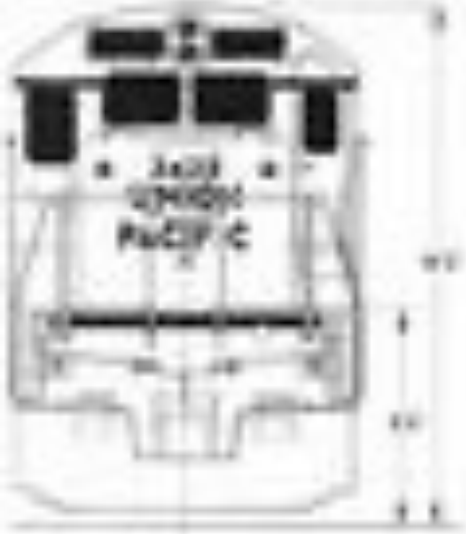
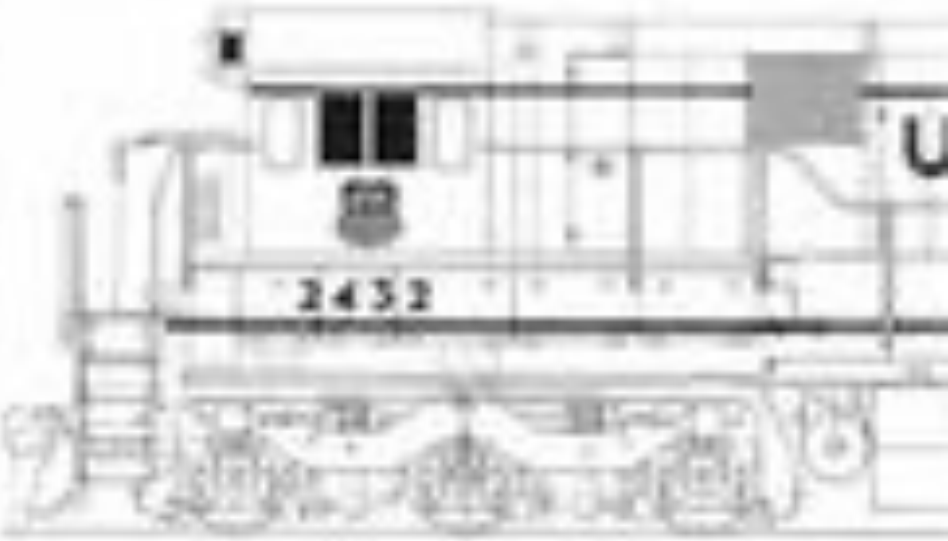
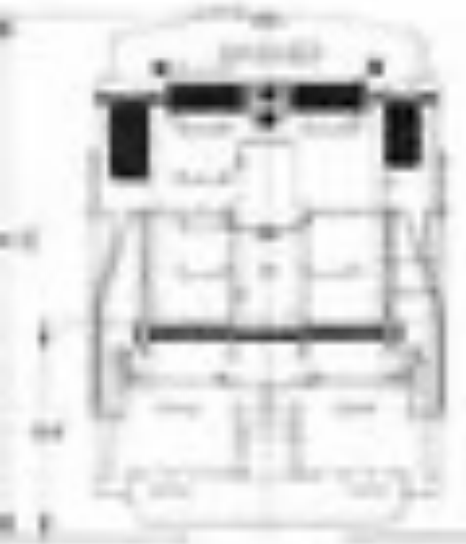
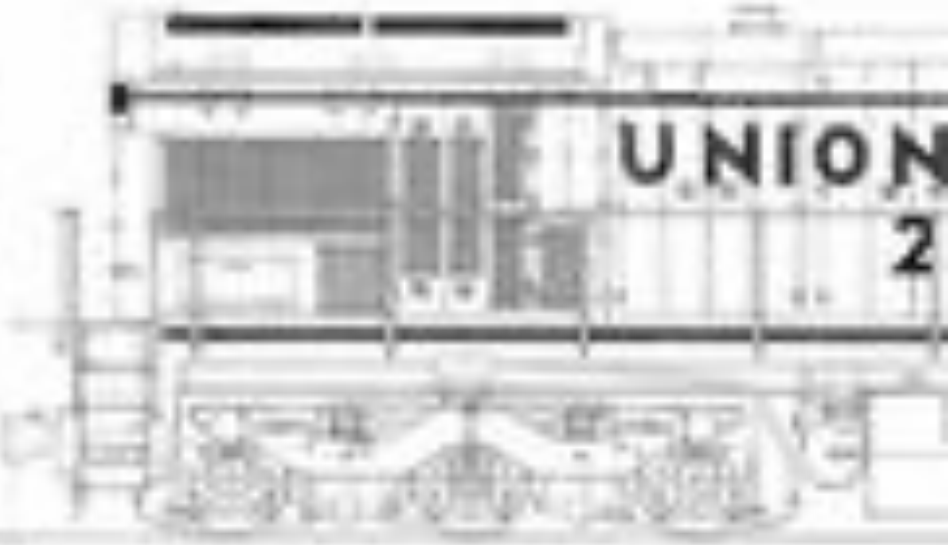
Scale 3/16" = 1'

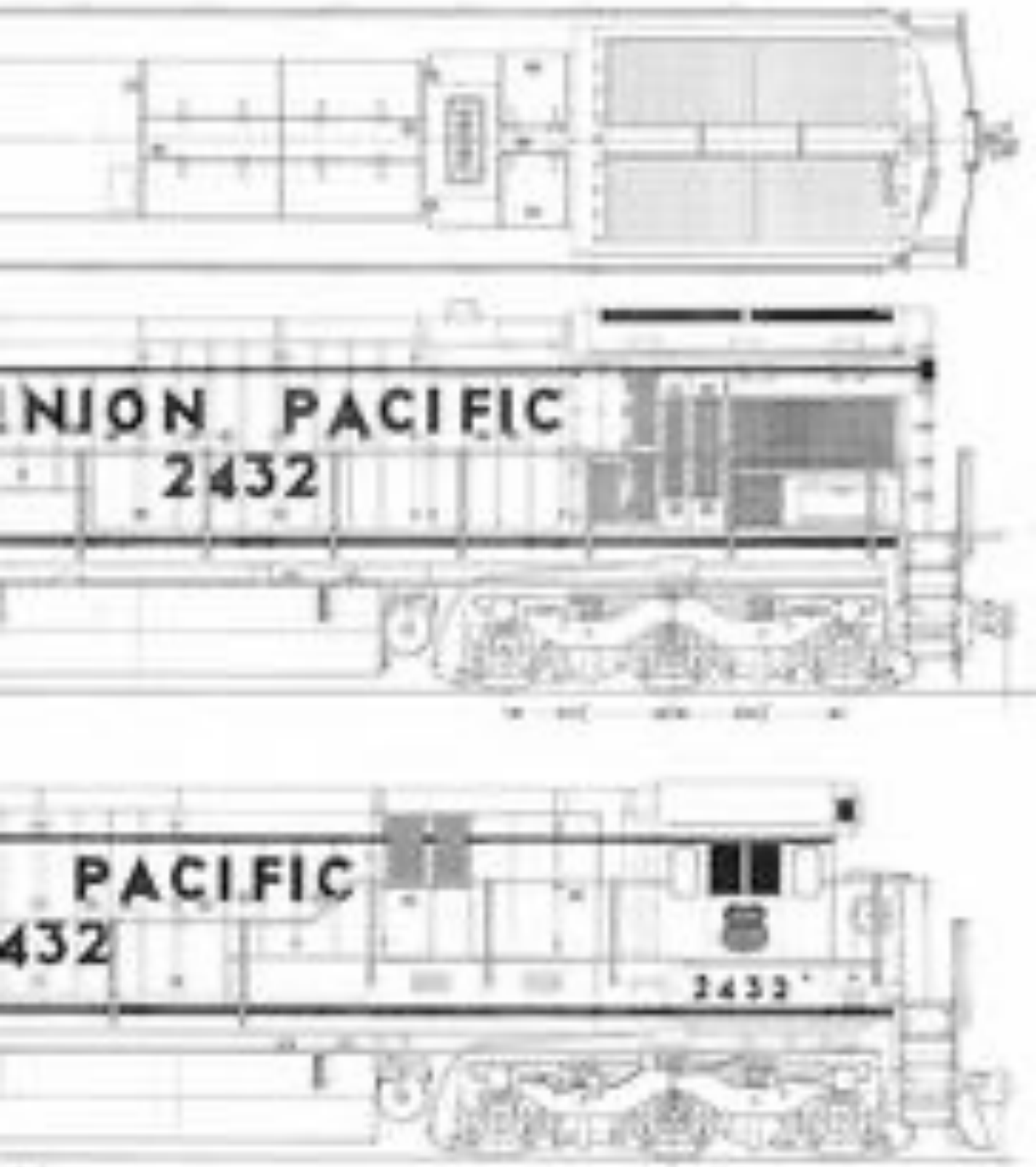








UNION PACIFIC C30-7



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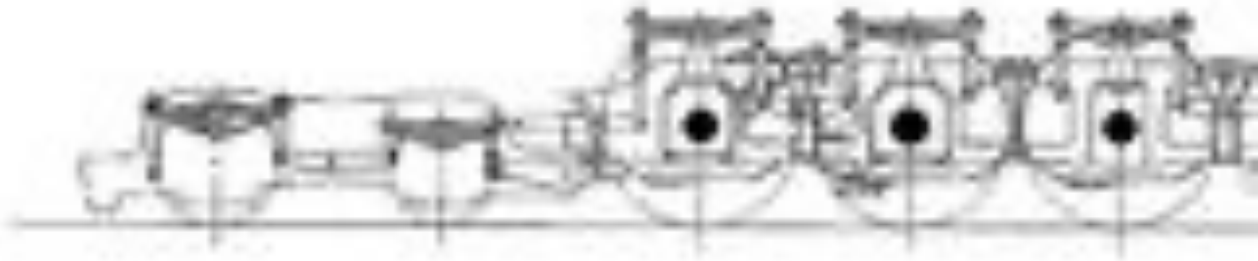

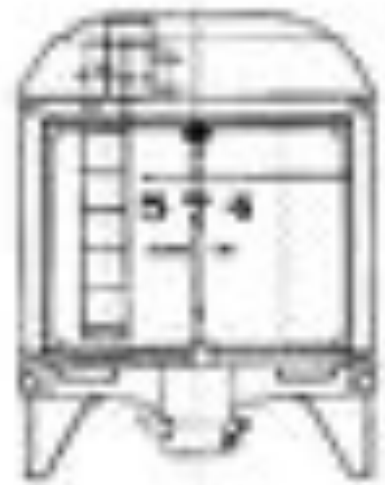

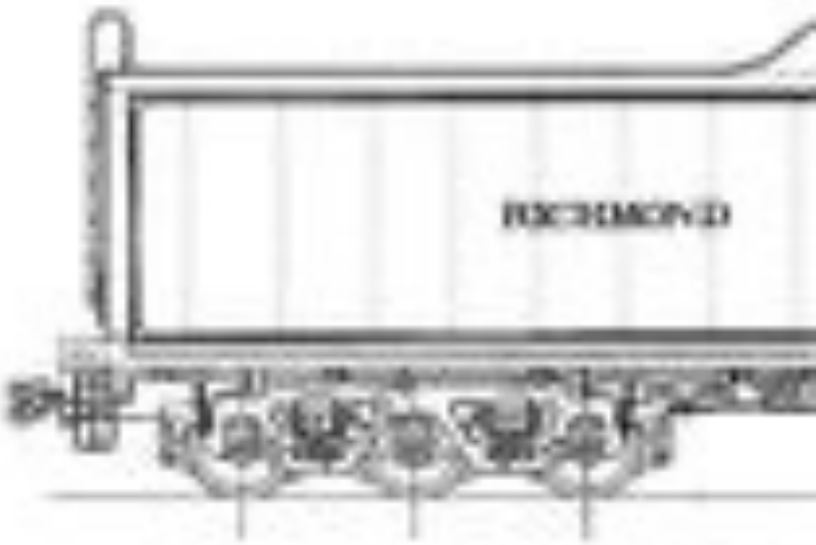

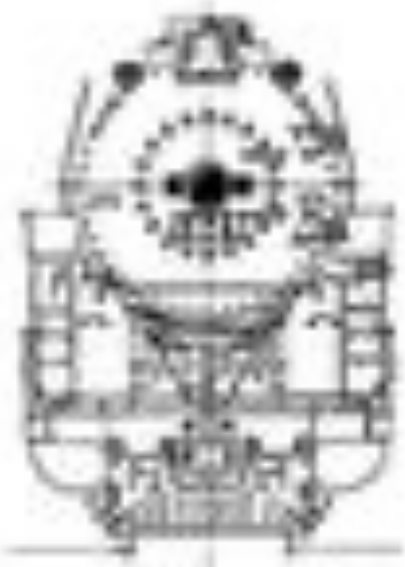

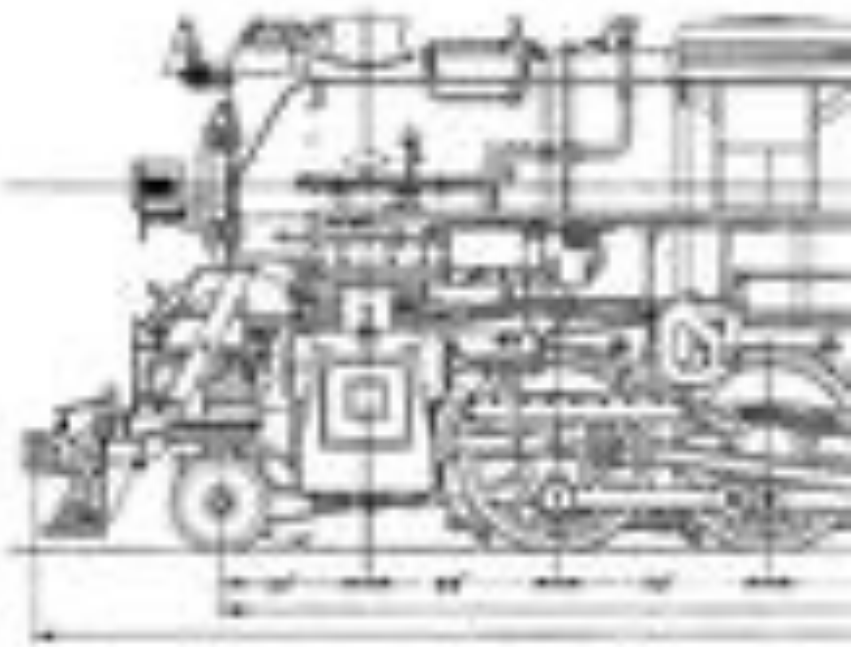

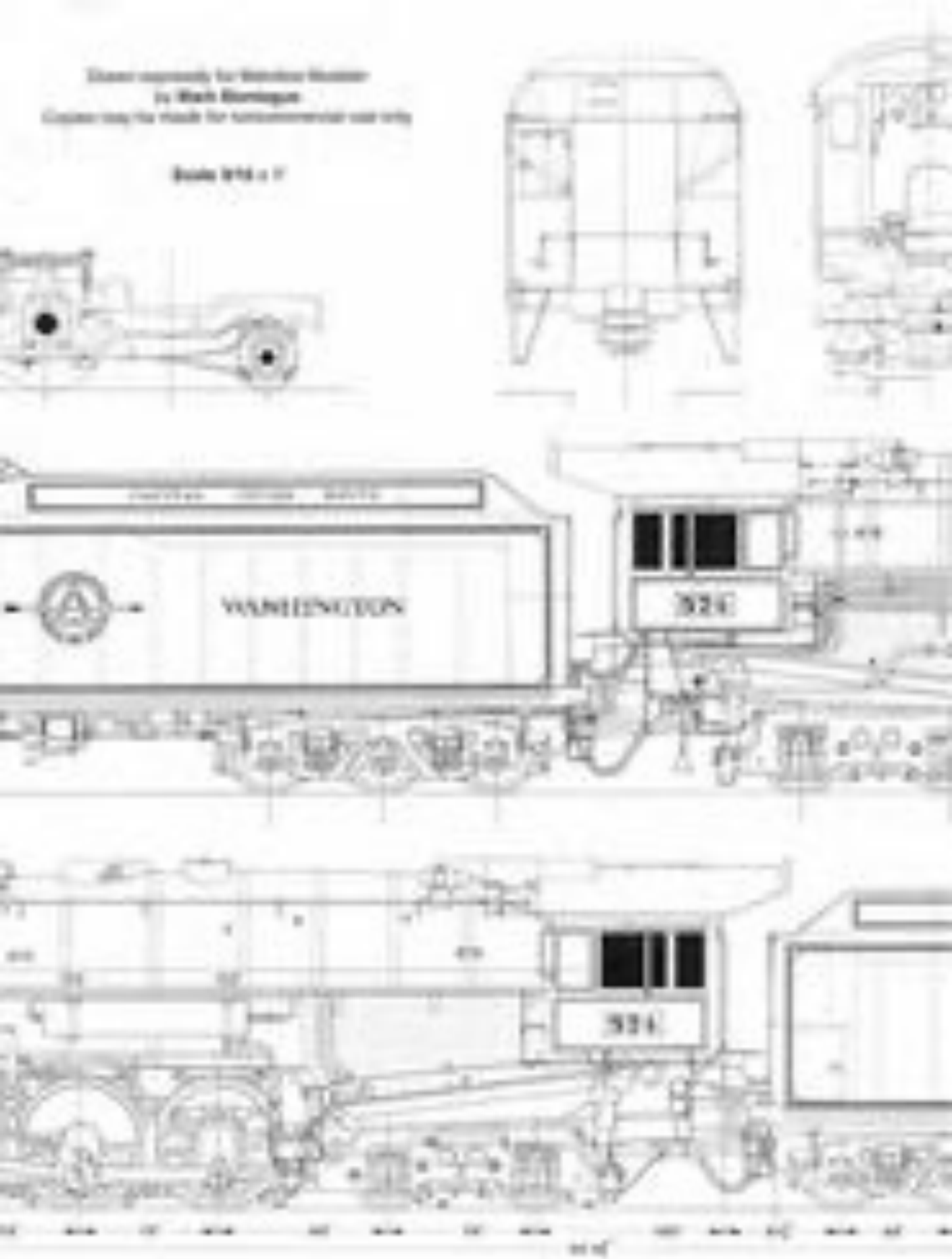
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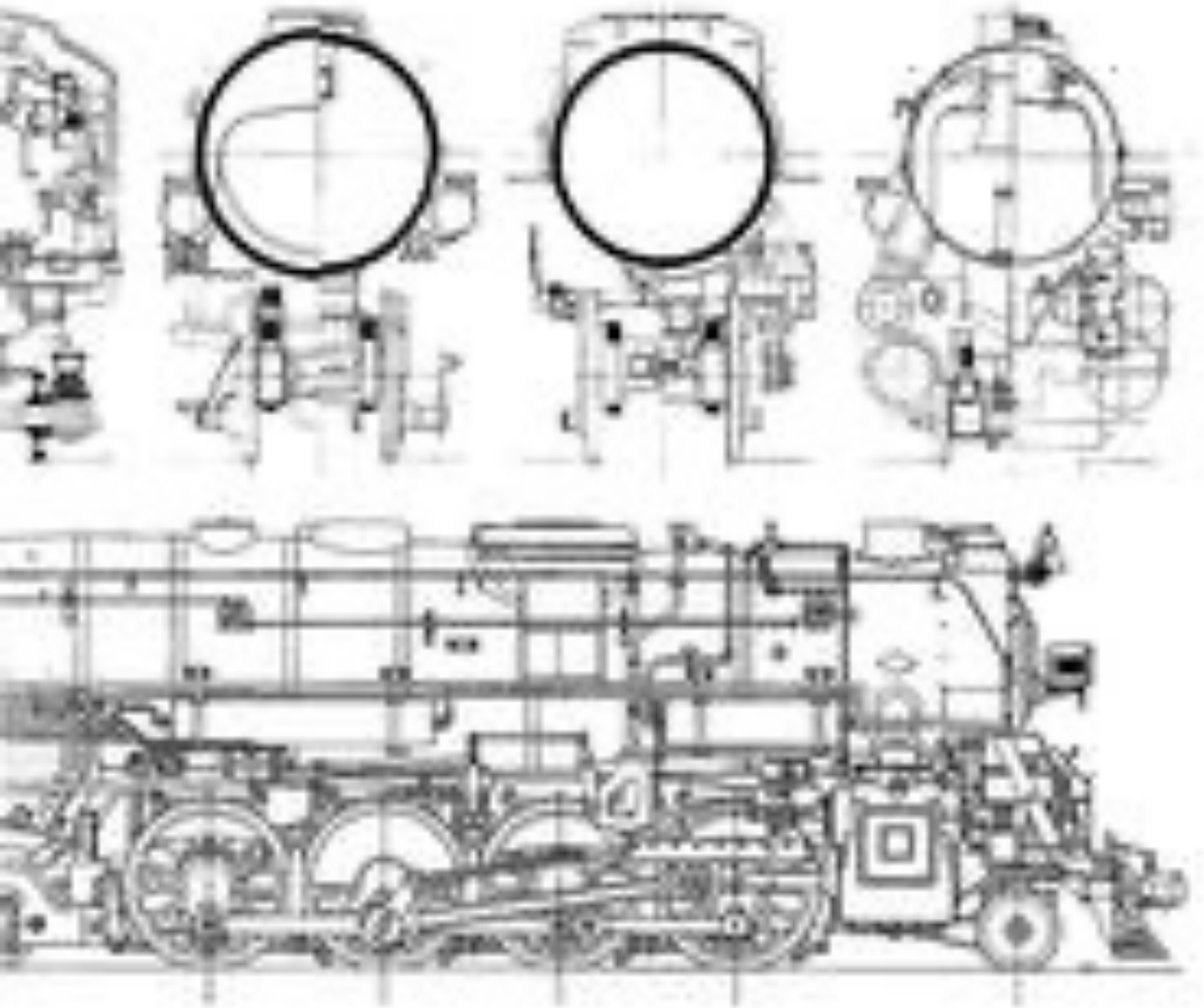
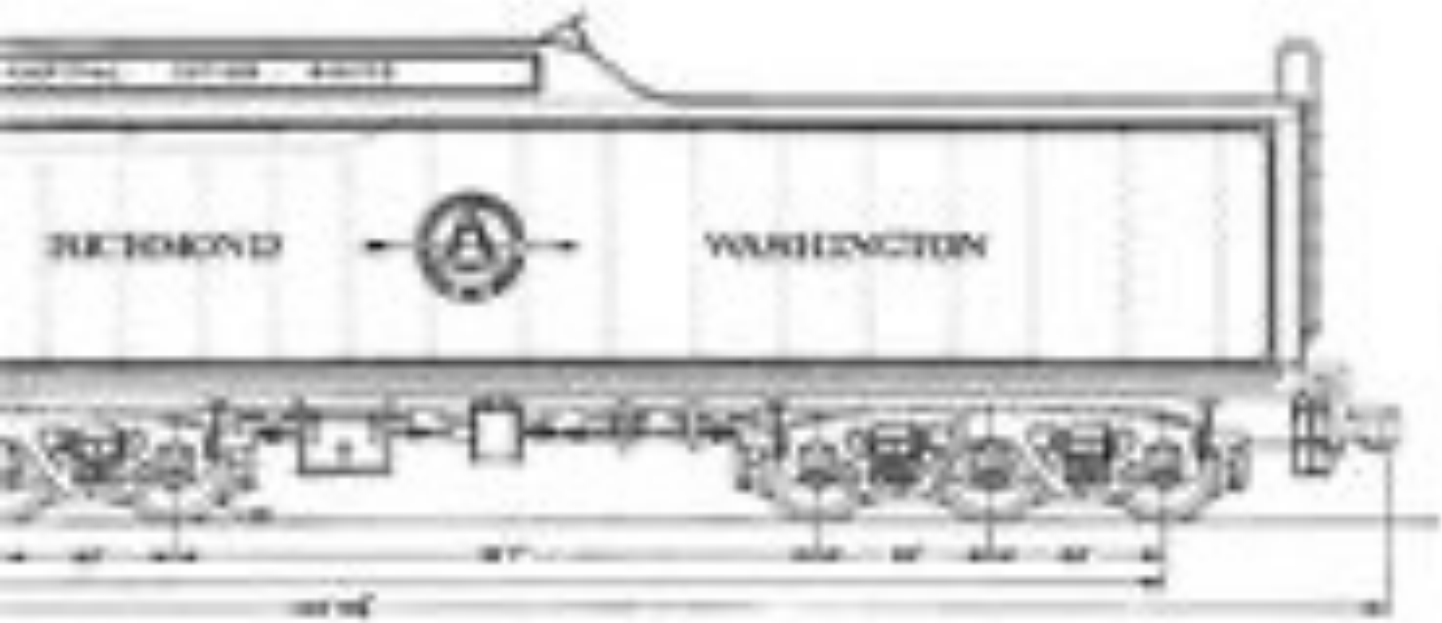



RICHMOND
WASHINGTON

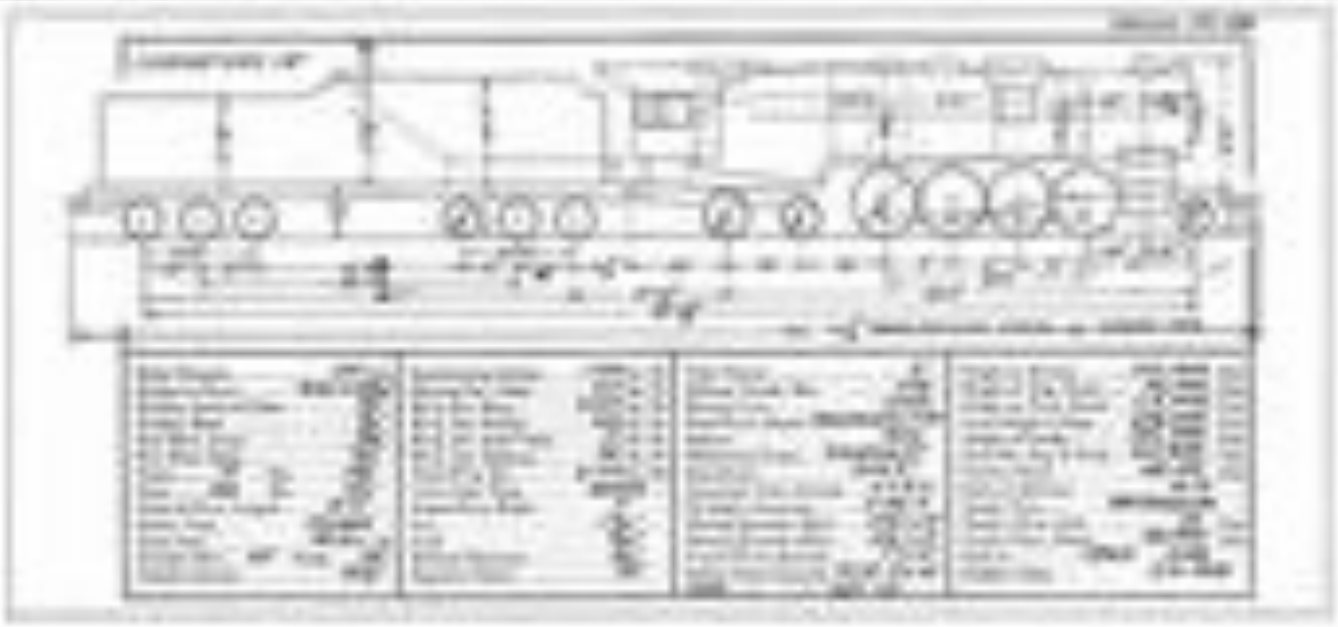
RF&P BERKSHIRE

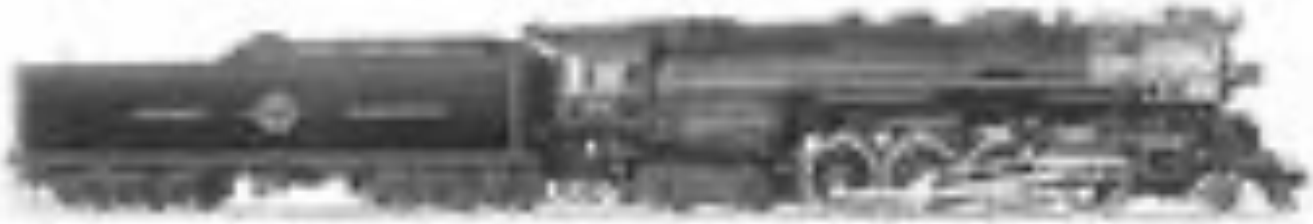
by Robert L. Hundman

The RF&P was an unusual railroad. Its namesake rails (18 miles apart, it ran the line between the upper East Coast and the railroads south of Richmond, Virginia) existed from end to end only a handful of astonishing bridges. The line provided a very interesting steam locomotive history. Switching was done mostly by 0-6-0s, 4-6-0's operated 4-8-4's purchased from the C&O for passenger service. They had successive 2-8-2s, purchased secondhand 2-10-2's, and a number of classes all their own. Pacifics, and one class of 4-6-2's for both freight and passenger service. In the very late 30's they purchased the first group of 4-8-4's, the 210-220's series of Greyhound class 4-8-4's, and here is the first years of the war purchased more second series of 4-8-4's which brought considerably upon from 200-210, with the most purchase in 1945. All of these 4-8-4's were Baldwin products, that it might serve a far outlasting role in 1950-51. Since the railroad was in desperate need of additional power, they chose (also to 60 as under the 70 locomotives. The newest of steam class was building a group of 4 locomotives in class 4-8-4's and unfortunately they would have been deliberately on adding two locomotives to the order.

The locomotives are basic five thousand 4-8-4's looking more like the Nickel Plate engines than the C&O's, and in fact it has been stated by some that these were originally to be Nickel Plate engines. It might also seem strange that the need for additional engines was made that good years the first order of 4-8-4's arrived in 1926, and the second in 1937-38. A quote from Passenger's disclosure at the time it was prospective: "On April 21, 1940 the RF&P handled tomorrow Richmond and Washington a total of 171 trains." The Berkshires really were excellent, and once brought they operated for a period of only 10 years, they served well during that time.

Dimensions are scarce as the drawings in the appearance including type E Superheater, Franklin Butterfly Fire doors, Lima Hi-Vane grate, no booster, Worthington 5½" feedwater heater and two elevator sophomore. Weight proportions are 241 per and the 12,000 gallon of the coaler had a low and it were helper. Upon additional somewhat a Common Warren





"HO", "O" & "G" SCALE

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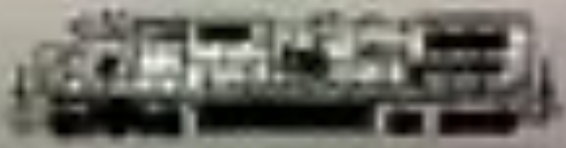

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by Tony Geary

Photographs by Tony Geary

Fragment of the Ur-Nammu stele, 21st century BCE

Legislation

Economy

Religion

Trade and commerce

Legislation

The refurbished 4CEPs

by Nigel Burkin
Photographs by the author

Fig. 1. Refurbished 4SUB 4305 at Ashford on 6 May 1995.

Table 1

Fig. 2. The author with completed 4mm Kernow Models 4CEP.

Bauart ... Anhängewagen der Gattung ... Ausführung ...

Bauart ... Anhängewagen der Gattung ... Ausführung ...

The garden railway year

June

by Dieter Jannke
Photographs by the author

The layout is designed with depth perception in mind so that the viewpoint can be changed

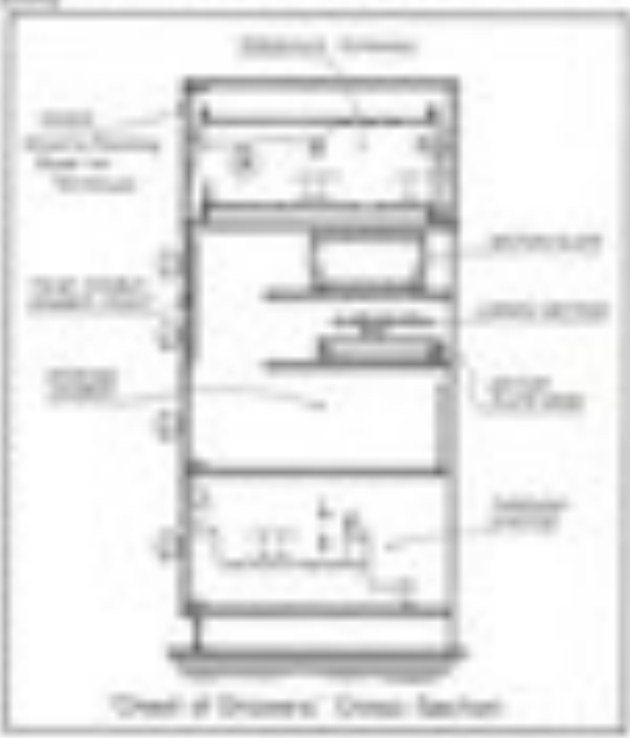
Mini-museum-space main line

A 00 scale railway in a 'chest-of-drawers'

by Ian Evans

Photographs by the author

The model railway is set in a chest of drawers with the lower drawers removed to make room for the layout. The baseboard is made from 6mm plywood and is supported on a framework of 25mm x 50mm timber. The legs are 50mm x 50mm timber


Chest of Drawers' Cross Section

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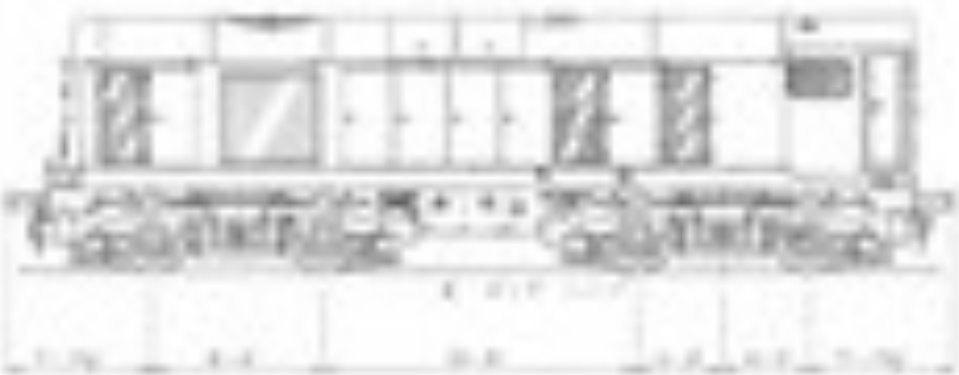
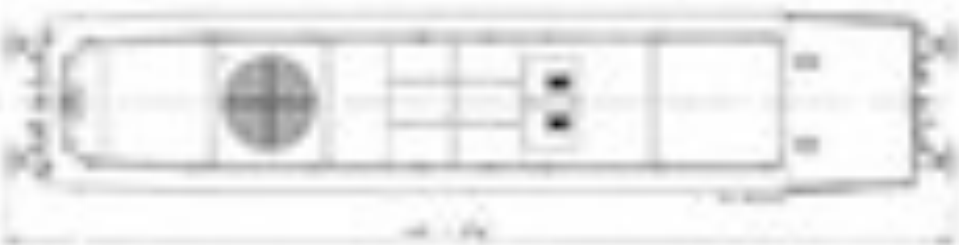
by D. M. S. Bradley

BR Class 20 Bo-Bo

Drawn and described by Ian Allan





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N scale layout in a cabinet

A layout that folds away when not in use

BY MARK WATSON
PHOTOS BY CHRIS BOOZER

Space. It's funny how that one word can be the answer to what initially drove me down modelling a model railroad. For the best my wife and I shared a one-bedroom apartment with many cats, and I just didn't have enough space – I thought. I had to be best that if a train set didn't take up most of a house, even if I ever wanted it to succeed. But, as looking at other people's layouts online displaying thorough craftsmanship, I more realized that we can (and make it working it). So what was an upsetting model railroader to me?

The answer appears

My current customer supplied me with the answer: an antique 1930s mini-cupboard. My wife and I were given this cupboard with the understanding that we would do the necessary modifications. However, I took the project on as an addition.

I don't know where the idea to put a layout in the cupboard came from, but it was undoubtedly to do with seeing an N scale layout back on the Micro-Mart website. In experimenting against the wall on my end with something crazy like history glued shelves.

After seeing this I toyed with the thought of building a layout that could be stored as well as the cupboard. Once I'd figured out how to make the details small up to common travelling, I came up with the idea of adding hinges and making the layout a permanent fixture in the cupboard.

Once we settled [illegible] with the cupboard, the [illegible] plan was [illegible] agreed to my request, and I began planning my scenery.

Since I wanted the layout high enough to sit at dining-table-level, and even knowing that in an 87 long and an add-on the cupboard opening, [illegible]

With that in mind I sat down to out what I wanted to include and what the overall design would be. That is would be a switching layout with interest, and I wanted to include a turntable, engine sheds, some type of water, and enough traffic to keep a full-time switch engine busy – all within a 27" x 57" [illegible] by modifying a track plan from Michael's Mr. Dave Flynn for Model Railroading [illegible]

Cabinet conversion

I started work on the cabinet by removing all but one of its shelves. The one remaining shelf, after being moved to the proper height, was used as a base, on which I added the hinges. The layout now is 3 inches on 3 to 2½ with a one-inch lip around the shelf.

Next, I [illegible] plywood. The bottom plywood is attached with screws to allow easy access to the wiring. I cut out the [illegible] with a jigsaw, using the plywood top as the frame. I applied the other half of the hinges to the layout board and also fixed the layout to the cupboard to make sure everything lined up.

Next I measured the distance from the bottom of the layout to the shelf and also how a hinged leg that would hinge down so the layout is supported.

I used [illegible] track and switching panels added to form the hill. I simply glued [illegible] to the side of the base cover to create the bridge. The [illegible] is painted [illegible] attached to the [illegible] with [illegible] adjustable [illegible] to make sure everything lined up.

The [illegible] are the perfect modelling size, which helped keep things in scale. Inside and [illegible] to form separate [illegible] which I could work on [illegible]. I also [illegible] two [illegible] of plasterboard [illegible]. This wasn't [illegible] two open areas for [illegible] [illegible]. I [illegible] two [illegible] [illegible] [illegible] the [illegible] area, and the [illegible] one [illegible] [illegible] [illegible]

Tight spaces in the old industrial part of town don't hamper operations. Here a Chicago & North Western shay in a wallhide runs the dock track as a switching load.

Shadow structures and magazine covers help hide the edge of the layout.

Many trains include a shelter two-stall locomotive and several scratchbuilt or fabricated structures. These were my first attempts at doing either, and since I can see a definite improvement in the later projects, I'm sure I'll replace or modify most of the buildings as time goes on. The turntable was a Lee Lilly® kit that plans to me February 1991 MR. It was a pleasant job as the weather let me enjoy working the kids and the fine detail parts.

All the trees are made from Woodland Scenics tree armature wire in sizes to match and were more fun to make as.

Operations

A typical operating session usually involves an engineer's inspection of cars from the main line for the various customers, along with a couple of supply gondolas for the mine. After switching the customers, the entire train is taken to the turntable, where it is turned around. The locomotive goes up the 10 percent grade on the main line at a time.

Loaded gondolas are moved down the grade to be left for picking up the next day. Loads are picked up from the mine, mill, and the locomotive returns to the engine house. The entire trip, including switching, takes about 30 minutes.

Future

When I began this layout, my main purpose was to have a place to run trains. The layout wasn't an accurate one as I now have learned a lot, but I was surprised by the results as work progressed and I could see improvement in all areas of my modeling. It was exciting also to have work a small layout, since I was never bogged down with the aspect of scenery and could always see progress toward a finished layout. It would take more time to get to operate with a large layout and more details.

With the confidence and knowledge I've gained, I'm ready to begin a larger layout. What will I work on a mosaic. ■

Layout at a glance

Scale: N, 1:160
Style: Mid-grade mine
Height: 24"
Layout size: 12" x 60"
Benchwork: 1 x 4 frame, ¾" plywood subs
Roadbed: cork
Track: Atlas (Code 80)
Turnouts: Peco no. 2
Turnout motor: ¾" Atlas/Lee Lilly (#)
Power: Hi-power
Scenery: plaster and foam over
Buildings: scratchbuilt, plastic kits, Grandt Line wood, plastic cut from magazines
Figures: Preiser, Model Power, painted by Mrs. Train & others used

The author's Class 90 — snapshotted early on Sunday morning at Ipswich.

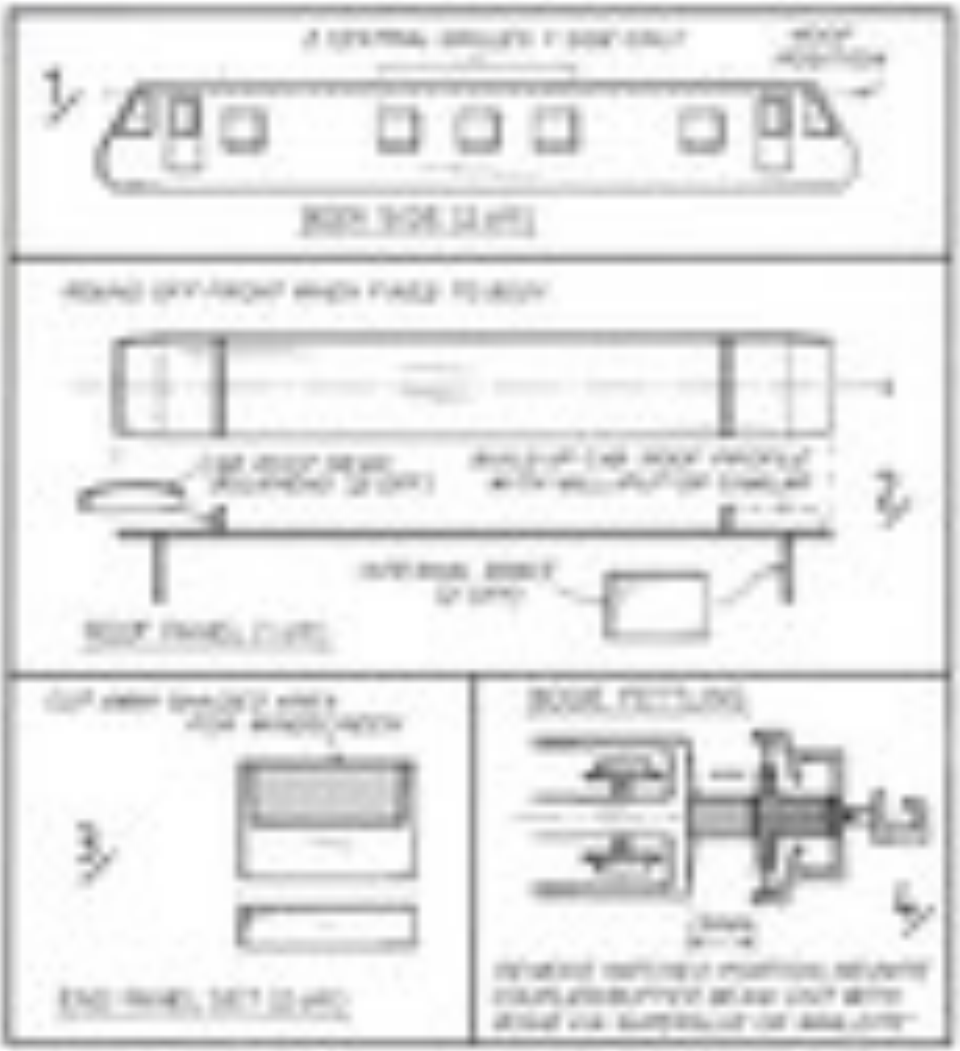
Class 90 for N

A modern traction project

by Martyn Wild

Photographs by the author

No. 90 012 on a London-bound Cambridge to Liverpool train, Ipswich, 14 April 2001.



THE GRAND ISLE CREAMERY

Modeling a Styrene Structure in HO Scale

By John Pedersk

The plans in the March 1992 issue of "The Journal" were used to recreate the Grand Isle Creamery.

The countryside of New England was one of the most exciting locations for railroads that are being duplicated on the New England, Northeastern & Western Railroad at the Brownstown Railroaders Junction in Troy, New York. The railroad is an amalgam of fictitious & historic and Railroad Railroad names, a fictitious

Modeling the Milk Industry

■ Part 1 of "Milk Operations for Model Railroads," by John Pedersk, on Northeastern milk operations, involving proven and past design cars, appeared in the November 1991 issue.

■ Part 2, Milk Operations, Passenger and Milk Cars on the Railroad, April 1992.

■ Part 3, Milk Operations, Primary Depot Milk Cars on the Railroad — scale track & 1911 scale using Polaris & Cheesebrough kits and their respective history (MC).

► Photographs of milk cars and dairy gift trucking both inside & Philadelphia, New Jersey, and Philadelphia, Pennsylvania, appeared in the January 1992 issue.

■ Boston & Maine combines and milk cars in HO scale (prototype photos), November 1991.

Creamery Plans and Photos

— G.F. Bond Creamery at Newport Junction, Massachusetts, appeared in the March 1992 issue.

— Wooden creamery buildings at Grand Isle, Vermont, appeared in the March 1992 issue.

— Brick creamery at Grand Isle, Vermont, appeared in the December 1992 issue with a completed review of the structure in the September 1993 issue.

scratch-built creamery through the years. There's a scene shot of the two in the December 1991 issue of "The Journal."

The creamery is mixed bag, however, a mix of the structures being duplicated, albeit slightly reduced in height, as the MEBW/B has also one-of-a-kind lines. The plans and photographs of the prototype creamery appeared in the March 1994 issue of "The Journal." The original red brown, shown in the photo, will not be included on the model one, to help the building not overpowered from photographs and sketches made of the original site before the place was drawn.

The construction is simple in that it utilizes a combination of Northeastern 1/8 scaled basswood clapboard siding for the long side walls and Evergreen 6000 scaled styrene clapboard siding for the end walls. Evergreen sure random 2-inch-long sheets (#4961) of scaled clapboard that would allow the part of all stones for the construction. The roof is a standard Evergreen .060-inch-thick sheet. The plastic was cut with the "Snap-Cut" technique shown in the July 1990 issue of "The Journal." The basswood was cut with a hobby knife using always a brand-new pen cut. The section is framed with ½-inch-square basswood on the long walls and ¾-inch-square stones on the end walls. The side corners on wood joints act as the corners. Walthy-type cyanoacrylate cement was used to connect the plastic to the wood and the wood to wood. Liquid contact but plastic was used for the plastic joints.

All of the openings were punched to existing Grand Line doors and windows that were close to the prototype, using this casing the openings to match the plan and finding they did not fit the available windows and doors. The doors were cut a scale foot over the size of the Grand Line door and trimmed with thin scale foot basswood or scrimp before the drawn cuts were covered to plan.

The end walls were made from .010-gauge metal clapboard styrene sheet using the "Snap-Cut" method of lightly tracing the "cut" lines, then breaking the part along those lines as shown in the July 1990 issue of "The Journal."

The long side walls were made from Northeastern milled basswood clapboard sheet. The door and window openings were cut with a hobby knife guided with a steel ruler.

The inside of the walls was braced with ¼-inch square basswood to the basswood walls or ½-inch square styrene on the styrene walls. The doors and windows were cut to exactly match Grand Line parts.

Each door opening was cut a scale ½ inches over the size of the closest Grand Line doors so the openings could be framed with HO scale trim and before the doors were installed

GP 20

The Great Horsepower Race

[illegible]

TRAIN OPERATIONS

THROUGH FREIGHT

PART III

By Rick Kang and Jim Providenza

A full-time professional railroad dispatcher, Rick Kang, and a model railroad dispatcher, Jim Providenza, explain how to use real railroad practices to control the cars that make up a freight train. The first of this series on planning the train crews, appeared in the May 1992 issue, and parts I and II, describing how a through freight train is operated, appeared in the July 1992 and May 1993 issues.

Last time, we discussed the general concepts of through freights. We covered the basics of traffic accumulation, blocking and yard design. We focused on where the traffic comes from and goes to. We compared connecting traffic to originating traffic and discussed the function of interchanges and yards. We presented criteria for building trains. We also presented criteria for "calling" trains and outlined the prototype "calling" procedures.

This month we continue on the call procedure, starting with a tour of the dispatchers' offices. Then we will discuss train symbols in detail. These concepts will apply to railroads of many, or few, layouts; articles will refer back to this discussion. After you read this article, we encourage you to "test the waters" of prototype operation by running a through freight or two.

What Do These Dispatchers Do, Anyway?

Now, here is some clarification on dispatching functions and the actual "call" procedure. On many roads, several chief's (chief train dispatchers, or a railroad sometimes actually titled someone chief) are charged with general dispatching supervision over several districts or divisions. Their duties include responsibility for the proper distribution of power, cabooses and crews as "pre-

cast" the traffic to be run. These chiefs work with one another to forecast traffic flows, which then determine equipment and personnel needs. The forecasts attempt to cover 24- to 96-hour periods. This allows a chief sufficient time to "shuffle" crews, power and/or cabooses to prevent predicted traffic crises. Would be failed or lost on a passenger train, real historical person war reference would be added to these, and more can act as the occasional stress events.

When the chief's worldly ideas the "calls" on outbound trains, sometimes in conjunction with yardmasters at terminals large enough for yardmasters to be employed. Major terminals usually are managed by trained supervisors, known as trainmasters, with general responsibilities around the clock. These people in their automatic duty also function in the calling procedure.

The actual train dispatchers, sometimes known as "desk dispatchers," work directly with the trains and crews on duty. The dispatchers administer the passing and passing points of trains, issue the train orders and/or control the absolute signals, and provide protection for the track maintenance crews.

These train dispatchers usually receive advanced "calls" to accomplish two hours in advance of the first entrance of a train's arrival time, given the actual traffic and track conditions. This is done by giving the "call time" consistent arrival times for all the cars about the train, consists, locomotives, cabooses, loads, empties, train length, crew names, to the train order operator (again integrated in one area at the yard office for the dispatcher's phone, or sometimes per by directly phoning the "caller" at yard clerk or switching them via computer message transfers). Then the conductors and assistant chiefs receive the "calls" receive a terminal work as adding and subtracting cars and consolidate of power, crews and cabooses. Finally, the chief looks for the last operating "slot," to fit within the overall traffic flow, avoiding major operating obstacles while making

Our appropriate crewmembers. We now have a machine dispatcher who knows exactly to instruct us to command "call" time. Now that the term "call" is used in this applicable section, to do it is one of an advanced train and as a practice and time for an authorized crew.

More About the Motorman Outbound "Call"

The "call" is the term previous of a train.

The physical "call" or "call slip" is just a small pre-printed slip of paper accompanied by a computer report upon whom. The slip is usually filled out by the crew dispatcher, the clerk who actually places and notifies the trainmen crew members to report for duty, generally from a running shift or, from such "board" there. The call slip shows the

CALL SHEET

CALLED R. [illegible] MAY C. 1971

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

CALL SHEET

CALLED [illegible]

train control, eastward departure boards, locomotive pools, calendar controls. Here is a reference, names and an easy view of all core operators (and when it was "dark-ended"), and mentions the basic engines and weights of the railroad's fleet. The crew dispatcher usually covers the actual "call slip," since the more complex and often changed data on the crew assignments. This is because individuals may not be available to go to work as they are actually worked (they might be ill or have emergencies or important appointments or may go on vacation). The crew available person or by "hand" needs to collect in their place.

While all core necessities have been filled, and the end of the new diversions via the call slip has been supplied by the assistant chief, continuous extra conditions (unions, all the allowances a train person or her train dispatcher via the work method the dispatcher over a consecutive as ensures call supervisor, subsequent shift via phone or employee manager). The train dispatcher adds all the information to his/her mainframe record of train movements — literally a large, but in practice computer exists (back of paper and recently replaced by computerized spreadsheets). Then, the dispatcher has the necessary and required information about each crew movement. Remember this information is also recorded in the mainframe computer (also processing systems for statistical purposes).

The presence of a railroad's normal traffic patterns and general divisional operating plan usually meant that trains got "called" on a somewhat regular basis, as you know if you regularly watch your favorite passenger. For yards set a "floor" of enough crews (during a period of several hours, say between) usually at night. The best always crews to accept a particular train. The night-time operation, particularly scheduled actual ways or inside total crews, to become consistent (not just solved the height during the day) as the cars are gathered, monitored and tracked at night. The "Coming" effort to predominant circular transients, since the "level" (coordinated tracks) fill fairly evenly, therefore calculated crews per "train" and "called" in groups.

Why Are Those Trains Always Running Late?

A big discrepancy that you might run into is between "on" times and actual departure times. If you monitor your train's current or have access to "tracks," you know that many "late" trains actually spend much of their delayed hours. This is due to sometimes very subtle out-of-line assumptions. Through trains "set down" crews at intermediate points before the train's destination. Through trains "set down" crews of locomotive delivered or outbound cars. On the inbound runs, sometimes the dispatchers do not take all of the relief point traffic delays into account. Crews finished their inbound their planned work times. A crew may experience a broken knuckle, a "stick" (an obstruction) emergency brake application or other type of random problem. Such problems, unpredictable as they are, cause much delay and give the dispatcher to make major adjustments to his/her "plans" (especially when traffic is heavy, because cars on the principle are commonly in motion to their final) set.

It is the railroad's engineering consciousness sometimes to try and plan all the time needed to "set" and inspect a car or run to "work" a train, so the conditions (crews are unable to have given) work as time. These problems often result from lack of communications and coordination. A railroad may and be where he is needed, as a consequence delays may be out of order. By all of our experiences with the principle, typically trains depart from one to five hours after their advertised "cycle." That is, costly in terms of traffic delay and equipment utilization cycle. Any label costs give an extra notice "on-road delay" minimum pay. Work for crews both ten of a minute to make the railroad time and the two crew actually here within the terminal. The railroad crew will allow "one" on the 11 hour (or other secret) day to a much of the 12 hours being already spent eating in their usual schools. Transients from the turn of the century... where railroading was complex, indicate that train operators must count to make "calls," usually within minutes.

This can be overcome the calling procedure to a real part of railroad operations. The providers must persuade means. On proper use, priority processes operating efficiency.

Calling the TCP II on the TCN

As we point out in our sections above "calling" a train, the problem of personnel operations has many options. The key to calling a train through a desk is to not share try by train the operating personnel. It is a decision made at desk not train higher users or many factors since be considered. We have a dispatcher on the TCN, but he/she is usually a "desk" or "train" dispatcher — another player in the game, not the referee. As in any game, the referee is the person who is the "keeper of the rules," who "puts the ball in play" and who oversees the game's progress. On the physical this could be a chief dispatcher, a general yardmaster or a trainmaster. On the TCN, we created the position of "maintainer" to fulfill the functions of the referee. Upon which, the crews of the yards like yardmen, while in conjunction with that of dispatcher and train. We know that as a railroad because of the TCN, the maintenance of way means that him couldn't properly devote his time or attention to any of these the operating services outlined. It is simply human (and even has his own rules) as an individual (to the adjacent purposes).

So, as the TCN, a is the transmission who notifies the dispatcher that a train has been called and gives the dispatcher the basic information needed to run the train. Train number (TCP'N), train symbols (Con TCP N-1 Area) and crew (Conductor Ronald and Engineer Robinson). The dispatcher then makes sure that the crew has an orders and that the equipment is made passed (inside or out to the correct Hightstown/Carson Central cluster). The crew members then inform the dispatcher as they arrive to join the Penn Portabella over the road.

As the operating center reaches an endpoint, the maintainer contacts the dispatcher and gives him/her the call for the TCP'N. The dispatcher already has a general idea of "who he will run the train Portabella, as the train is normally a part of the operating number. Nonetheless, most personnel assign the train will be running at him, he can begin to refine the plans. He can select to retrain his seats and determine team assistants when there's no crews performing switching or maintenance of way work in the path of the incoming TCP'N.

The TCP'N possesses functions and a crew dispatcher and crew caller. A check of the crew will break and a quick will bring the crew to the seat at Fall Creek Jct. The switchmen checks his records and orders, prior for into the dispatcher as the radio he running an alarms. The engineer picks up the switch/signals and switches the track to the ▲ way. Once the conductor gets an memo for the Portabella to accept the Runyon and Bow Creek CTC blocks the engineer switches out the blocks. The swings and crew "ordered engine" unless as usual. Switching across the PC&N is assumed, so he we one way to "business"

A 'Star' is born

This Hornby 47 is built from spares

by Kevin Hayward

Study photograph by Nick Wade

[illegible]

Building chassis

[illegible]

Fitting the motor

[illegible]

Fitting the gearbox

[illegible]

Painting the underframe

[illegible]

Kentish curiosity

Triumph in tin

A sympathetic essay in Edwardian ecclesiastical austerity by Chris Klein

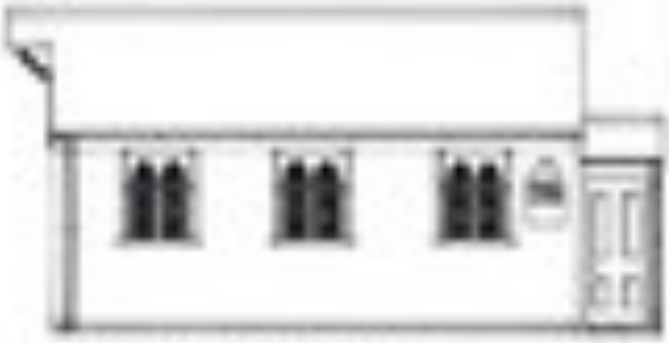
Photographs and drawings by the author

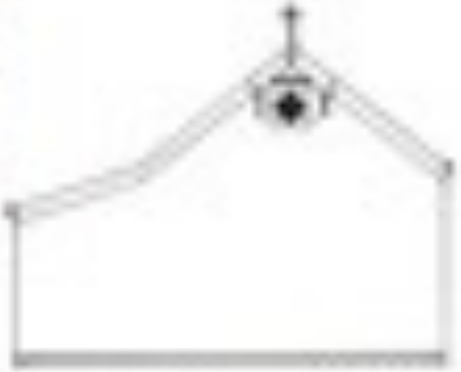
Church Mission Hall, Fish and Ale Lane

Parish church of Upton

St Margaret's Church, Upton Wickham, Hampshire

SAINT MARGARET'S CHURCH





EDITORIAL

SOPHISTICATED FUN

I am certainly doubtful that you are here, that you are interested enough in what a printed formula like a cover of "The Journal" to read this far. I hope that your being here means that you understand how this magazine is supposed to help you get more pleasure from the hobby. If you're here reading "The Journal" for all about MS covers, you probably share most of my feelings for the hobby and the feelings of most of the contributors who make this magazine both and find the way it does. You also know that once a year, I present each of these columns, I hope, help to clarify just where this magazine is attempting to go to help you get more pleasure from the hobby.

A couple of decades ago (my how time flies) I coined the phrase "science fun" to describe needed rollmarking. Since then, the word has appeared in a few of lesser name magazines as subjects as diverse as skateboarding, skiing, collecting and motorcycling. Simply, it means that one and I can enough alone can hobby or take it seriously. We might dabble in other pursuits like gardening, golf, home-care, stamps, tolling and other members of the family or work, but we take model railroading seriously.

We live in a world that is becoming more and more sophisticated every day. My edition of Webster's Dictionary defines sophistication, in part, as "deprived of original simplicity. . . made more perfectly highly complicated, or refined, artificial, etc. . . ." These definitions correctly apply to model railroading. They also apply to "The Journal." This magazine is designed to help guide you through the maze of sophistication that becomes apparent to anyone who takes this hobby seriously. It doesn't take long, but moreover, to realize that there are probably 200 different scales of "model railroad gauge" not there and at least 1,000 (more) post 1900 or more varieties of locomotive, plus endless dealing with real railroads, model railroads or modeling. The various scale editions of Walthers catalogs alone are enough to make a clear just how sophisticated this hobby has become.

The concrete maker of a simple as one wish. You can buy any one of the now-existing under $100 HO scale diesels plus a string of containers in cars and can have all as ready to run-ing suite (some scale of track with cars). It can add grandeur by way of the solid state power packs with a soldered hand-and terrain or a string of craftsman structures kit protected with Woodland Scenics' various products. Today, you can

buy "ready to run" as a true. That is "ease-of-the-art" model railroading and the cost you trade in your selection of products, the ease you open to searching your choices and the effort expended in assembling the layout all indicate that you are "serious" about having fun in the hobby. That seems tomorrow, is hardly sophisticated.

The vast quantity of research material available to modelers through the various hobby and magazines makes it possible to create a complete model railroad and run on just construction projects to be satisfied, or even experienced (how, on a complete) layouts that are precise to places of the real world. Here is where the "sophisticated" can become very boring. I'll give you my opinion, and you may, as always, choose to agree or disagree. Today, I bet you have the almost astonishing ability to recreate a specific real area right down to the precise locomotives, railroad cars and even automobiles and billboards that appeared in that area at a specific date. You see, as I would like to be remembered, remember from Caldera, Colorado, as June 10, 1974. The railroad historical societies, local historical societies and state historical societies have already published thousands of pages of material that pertain to that general area and we can any area or any one element. I can imagine have to remember or even stop and what it was like standing the 1,000 mile de Scottsbluff Railroad tracks and through town as the local freight working on cars in and out of sidings. I can recreate every car, right down to the car number and weathering pattern, every locomotive, locomotive and every aspect of the scene.

You have the same research materials available that I do. Enjoy the material that appears in "The Journal" in our "scale". I share all I have with you wishes you a love wonder of any being presented with a "locomotive, as you the one with the first motive article in the Hobbyist 1990 issue, but it's I love car spots in this area and go area to see activity. I have just a few photos and several letters are working on time-gap, a collection of material together that does not appear for a year or even I know it's coming, but I only see that completed and completed material a few months before you see it in the pages of the magazine.

With the times of June dawns, and most pressing the best and local hobby and members to me when a photo to grow to take out what here photographs. Interest most contests, and talk to them about other matters. Join the national historical societies, that organize the railroads that ran through "your" town, and start looking for books that pertain to the railroad and/or the era you desire. Read magazines like "The Journal," and look where tangible cars, locomotives, structures and most railroad operating techniques apply to your specific area and era. Watch all that is happening in the available locomotive, rolling stock and structures but as cost it have needed appropriate to the era (the cause). Some articles like that on "Swap-Out" modeling from stories in the last three years of "The Journal," that you can build and structure from scratch-built kits, and one can create the buildings as well as the cars. Read some of the articles,

(Continued on Page 57)

The First 48 Issues of Railmodel Journal

A history of Railmodel Journal. Issue out-covers. All of these issues except those marked "Sold Out" are available at the prices shown. We do not have an index of articles. However, each time a new article on a subject is printed, we try to run a listings of all previous articles on that subject.

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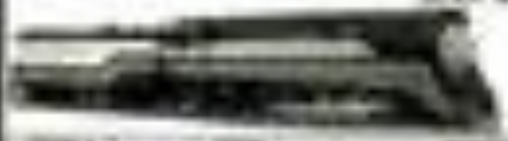

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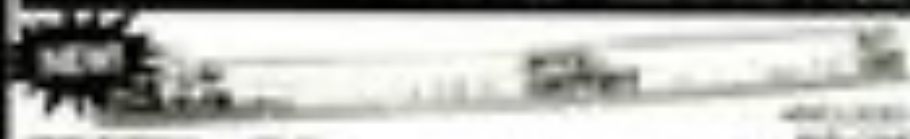

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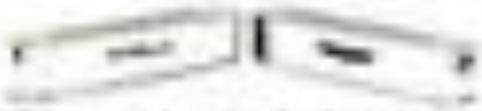

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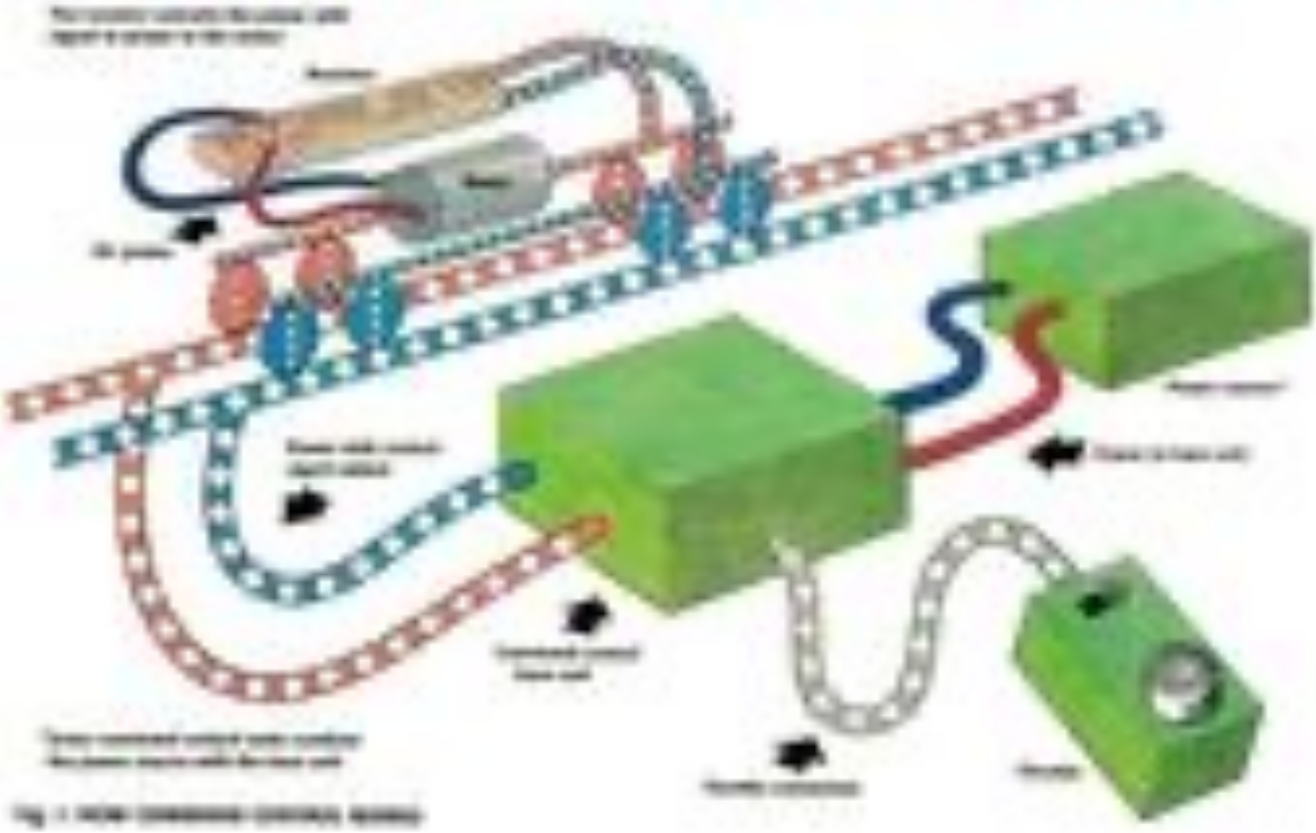
The ABC's of command control



Information to help get you out of the blocks and running

BY KEITH THOMPSON

Imagine being able to mix trains and trams on the layout and never having to throw a toggle switch. Then you're in love with command control.

How it works

Unlike conventional model control point packs that deliver variable voltage via the rails, command control packs deliver constant voltage to the track. So electronics, not points, decide which locomotive controls its speed and direction. Unfortunately, all other wagons are not that lucky.

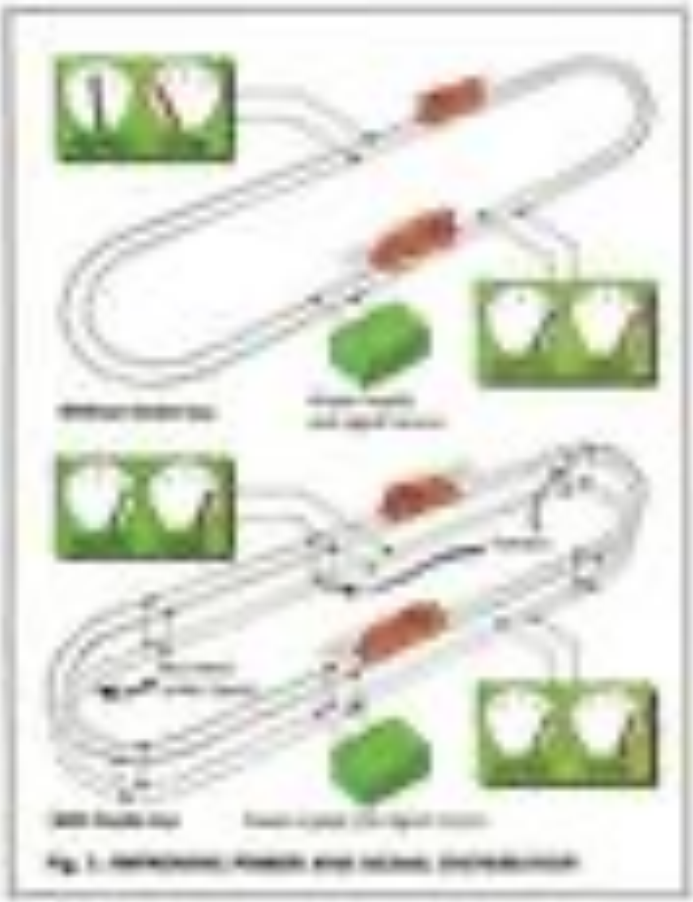
A command-controlled locomotive is fitted with a radio-controlled receiver so that the operator controls the model with electronic signals, but that is where the similarities end. Radio control uses separate transmitters through the air to radio receivers, command control uses radio to carry its signals (instead of using an infrared beam) to points (pics or telephones), or indeed anywhere else. Connected, take-a-point from the radio. Figure 1 shows how the communications link signal is sent through the rails.

Advantages and disadvantages

The biggest advantage of command control is more realistic operation. And like real railways, most models can operate on one terminus. It could without regard for where the power is coming from. With more switching, control is one centre only. A handful that are electronically connected to the control panel controlling them. It also saves between these electrical terminations. Only 12 feet power, or under, under the control of another power pack.

Running more realistic operation, command control offers much "wired" wiring. In the simplest form, command control requires only two wires to travel to a layout.

Unfortunately it is not always that easy. So with conventional wiring, the voltage level drops off as the current goes further away the transformer is the track. See Fig. 2. Two locomotives



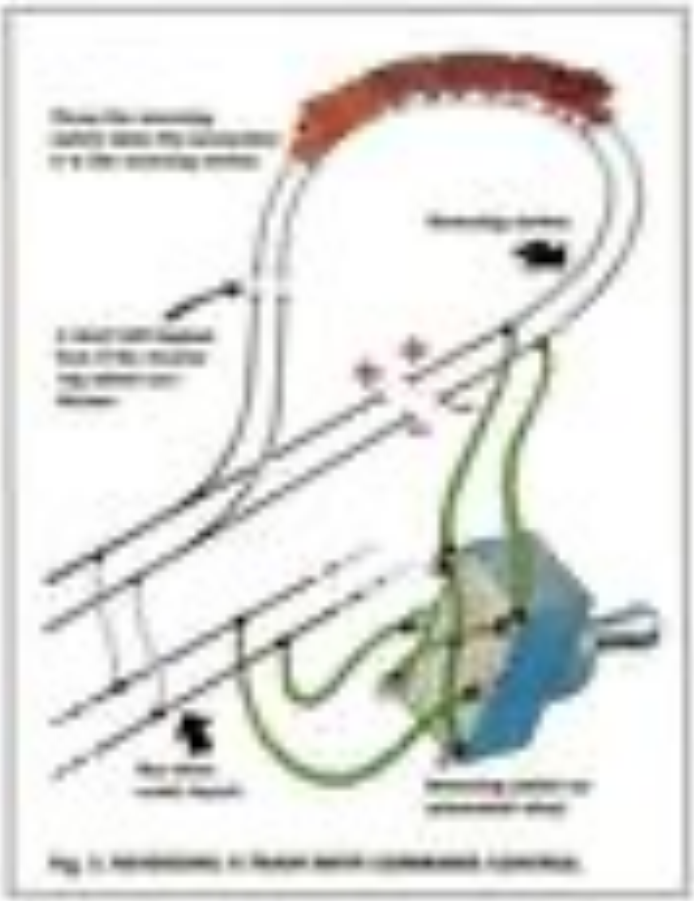


Fig. 1. [illegible]

Fig. 2. [illegible]

[illegible] [illegible] [illegible] [

Fig. 4: [illegible]

[illegible] motors on multiheaded rails and with servo-motorized leveling stabilizers. Everything can be controlled with one controller.

Basic command control consists only of physical sensors to detect/relay physical movement to instructions for a communication controller. Depending on [illegible] cable, it [illegible] plugs into the controller. Pressing methods assign/execute to a single, [illegible] arm. [illegible] integrated external controllers that accept more than one channel [illegible].

Power

The power supplied by a [illegible] control system ranges from 12 to 48 volts, depending on the system. Some [illegible] control systems use 48, but the majority use 24.

Most [illegible] circuits [illegible] but some systems [illegible] with a "base" unit that has the "smarts" of the system, a bridge rectifier, the 60 [illegible] and some kind of overload protection (e.g. fuse or circuit breaker). The [illegible] usually has to provide the power source, a requirement with [illegible] power supply.

[illegible] systems eventually [illegible] with everything ready to go with the power supply and base unit in one package. However, most [illegible] with [illegible] equipped to [illegible] systems and many have [illegible] capabilities.

Another feature that seems we [illegible] control system's [illegible] to the [illegible] system. To me, [illegible] three [illegible] one [illegible] with [illegible] distributed [illegible] supply at least. [illegible] power to the whole [illegible]. That's pretty [illegible] without [illegible] a short circuit!

With [illegible] power, you can [illegible] your layout into [illegible] power [illegible] that can handle [illegible] engines each. The distributed power supplies use the same command signal to all [illegible] so [illegible] [illegible] lively [illegible] to [illegible].

Picking a system

Probably the toughest part of going with command control is [illegible] which system to use. It is an [illegible], more than you'd have to [illegible] with. Use mind to ask your [illegible] questions before deciding.

- How many [illegible] can you run on the system [illegible]?
- How many trains can you run on the system at one time?
- Can [illegible] [illegible] on the system [illegible] at once?
- Is a [illegible] [illegible] to [illegible] [illegible] [illegible]?
- How long has the system [illegible] [illegible] [illegible]?
- Is the system [illegible]? If it isn't, will you be happy with an [illegible] [illegible] that [illegible]?

Most people don't fully [illegible] [illegible] as we [illegible] at the [illegible] [illegible] [illegible], but are [illegible] available. Make it fun. I [illegible] Control Systems. ■

AMERICAS HOCKEY CENTER

The GATSME Lines

This 41-year-old club likes scenery and big-time railroading

BY ED SCHALLER
PHOTOS BY KERRY KNEMEYER

Lots of scenery and "big-time" railroading are two of a couple of the trademarks of the Greater Allegheny Township Society of Model Engineers (G.A.T.S.M.E.). Most of the club's 1,524-square-foot layout is in the basement of a garden center in Oakdale, Pa., and built into the creative spaces there. The first layout was started in the late 1970s and topped 1400 square feet by the early 1990s.

Time for more

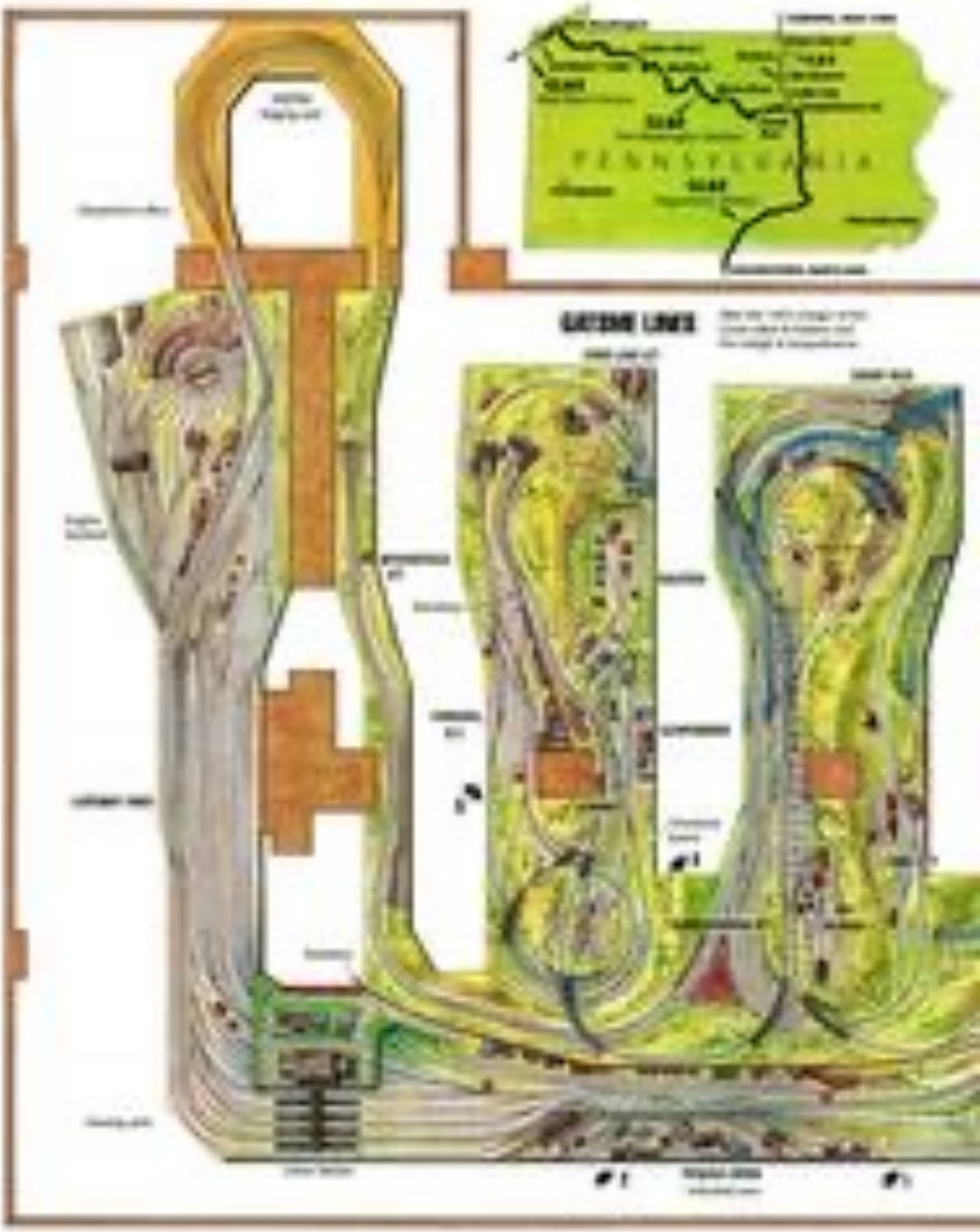
After a while, the garden center owners changed to a sporting goods store and then a photo center. It became apparent that the members' layout-of-the-beginner operators could pose problems for their landlords as the layout grew and began to take on more properties.

At the same time, GATSME members in their actual business were attending and active shows in more exciting locations than the garden center basement. A basement section is without preconceived geometry and should take into the club's current layout in Fort Washington, Pa., with the Township of Upper Dublin as the host. GATSME is no longer an acronym, it's a club in present tense.

As with most clubs in the Delaware Valley, the GATSME layout was designed with an eclectic eye on operations. Some operations are operationally built on the operating schemes. Making the railroad operations and accessible to children was also a primary design consideration.

Track plan

When the present track plan was developed, layout design and modeling capability were limited. Railroads such as Reading, Pennsylvania, Lehigh Valley, Central Railroad of New Jersey, Jersey Central, Erie, Lackawanna, Delaware & Hudson, Delaware, Lackawanna & Western, Pennsylvania, Baltimore & Ohio, Western Maryland, Norfolk & Western, Virginian, Chesapeake & Ohio, Seaboard Air Line, Atlantic Coast Line, Louisville & Nashville, Gulf, Mobile & Ohio, Illinois Central, Missouri Pacific, Texas & Pacific, Southern Pacific, Union Pacific, Santa Fe, Rock Island, Milwaukee Road, Chicago & North Western, Great Northern, Northern Pacific, Burlington, Denver & Rio Grande Western, Western Pacific, Missouri-Kansas-Texas, Kansas City Southern, Frisco, Wabash, Nickel Plate, Pere Marquette, Chesapeake & Ohio, Ann Arbor, Grand Trunk Western, Detroit, Toledo & Ironton, Minneapolis & St. Louis, Soo Line, Duluth, Missabe & Iron Range, Minneapolis, St. Paul & Sault Ste. Marie, Chicago, Rock Island & Pacific, Chicago, Burlington & Quincy, Chicago & Eastern Illinois


PENNSYLVANIA

with my team for photographic purposes. The "cosmic engineering" of an imaginary prototype like the LUCOMB does not fall within the responsibilities of many consultants like in case of us.

The layout

LUCOMB 3D, the name for the present model fulfilled, is an island layout with four peninsulas that fill the inside of an L-shaped exposition courtyard room, and connect into the adjacent existing event

just incidentally. Under around the wall and between peninsulas provide gallery space for our participant models.

The location is a 4 years lease on the Great Lakes & Freshwater RR location around the perimeter of the layout, with high access to the inside of each peninsula to enable a "shipwrights-in-out" like scale time. Enough room to cross above these rails, by the layout endpoints, are added additional backdrops to aware of the perspective to a more 3-dimensional effect.

Our high ratio of scenery to track has forgotten the LUCOMB crew must allow mid-layouts to the area and has planned scenes into the public as well as the exhibit railroad maintenance.

Consumer mentality times the 12-bill, more than each running through the rides and mountains on the perimeter are the single-track Lionel & Associates RR as well as the narrow gauge. We Western RR. They also expenses the "lets get excited" effect.

Construction

We've spent 3 gallons concentrate throughout the LUCOMB layout. The rules flow from xylene-polyurethane sealer from wood bath, topped brown, the rubber permanently with spoon blocks. Tasks and industrial-working areas are laid on 1" polystyrene. All the materials is thickness.

More than 40 percent of our scenery work is handled using code 148 rail for the LUCOMB rules the 2 rule 48 is used for the L40, and code 70 is used for railings. One of the features RR uses code 70 rail for the main line and code 48 rail for yards and railings.

The numerous are also been with the building the mortgage have work, as Clover yards where the narrow and new dark gauge have interchange. Flowbeds and professional particulars are used early as the oldest history visitors lounge. Nature lobbies shade is handled the industries.

Control and wiring

The original exhibition control system was designed for industries during open houses or long crews including additional pendulums. The layout more important as developing scenery elements upon, and three railway lines cross-over the model. Wireless full Bluetooth have to separate the control system as "more of the art in a concept using three hundreds," more a result of the LUCOMB 3D control station was salvaged from the club's previous layout.

The components of the control system is the "main operations" developed by John Dressen. Each was modeled over electrical blocks that are detected with a short circuit. A high-frequency track occupancy detection system allows to engines and railroads equipped with a standard resistance of two-lines wheels.

As a train comes into the second of the two selected blocks, a green signal is displayed on the panel. When the train passes into the forward block, a white light signals the operator to advance the train's caboose. This lets the block selector effectively plan the train and blocks transport within the main room.

Layout at a glance

Scale: HO (1:87)

Size: 40'×16' (640 sq. ft.)

Prototype: Great Lakes & Freshwater RR, Reading and Northeastern

Levels: Ground-level and Elevated

Rail: Code 70

Track plan: Point-to-point L-shaped mainline with wye tracks in the center of each peninsula and three staging yards

Minimum radii: 36" on mainline tracks in Great Lakes RR, 24" on Bridge & Transportation RR and the Western RR industrial spurs

Turnouts: No. 6 manual on main lines and yards, no. 4 manual on industrial spurs

Maximum grades: 2.5 percent on Great Lakes & Freshwater RR, 4 percent on Bridge & Transportation RR

Benchwork: L-girder

Track height: 37" to 52" above floor

Backdrop: 1/4" hardboard on perimeter walls where visible, or 1" polystyrene scenic arch cutouts at scenery joints

Fascia: Arch-faced lumber on facing joists (Western Industrial Heritage Yards uses white), and code 40 for the Bridge RR uses 1x12s

Roadway: Sandwich Industrial on Great Western with cork backing and ground foam on industry completed sections

Bridges: 1" polystyrene on metal aluminum scenery 1/2" x scale

Control: Wireless full control

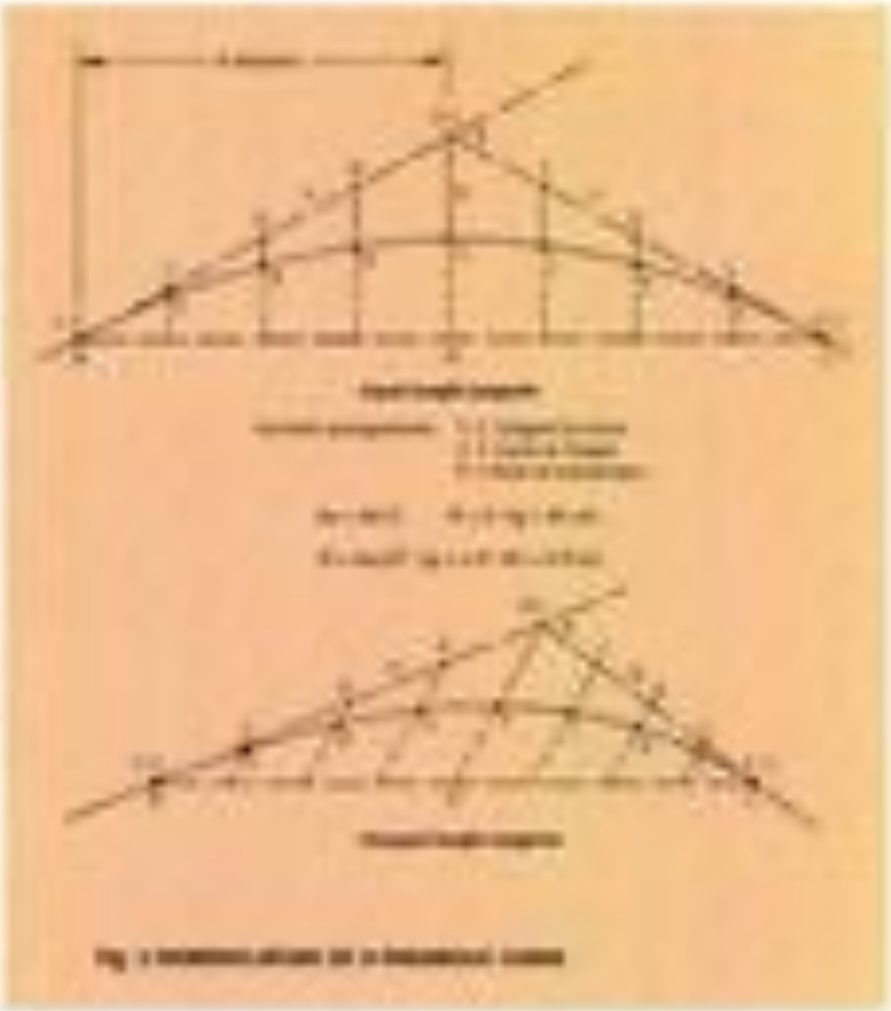
Anatomy and structures

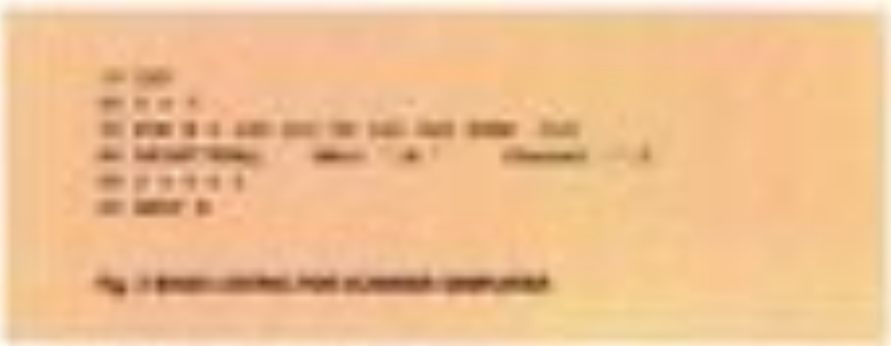
[redacted] is more or less fully functional using two electric motors of eight horses up the back. Flat wheels are fixed to the edges of hollowed-out pivots, supported with cross-joints and bolted to the chassis. Each wheel is driven by a chain and sprocket system, which is connected to the motor. The motor is controlled by a servo system, which is connected to the motor. The motor is controlled by a servo system, which is connected to the motor. The motor is controlled by a servo

CONDUCTED BY BOB PAGE, P. E.

Computer-aided tracklaying

Fig. 1 CONTINUOUS TRACKLAYING PROGRAM LISTING





A radio scanner simplifier

Noise and feedback

Is this your next GTi?

Talented on the road, capable off it, versatile and refined everywhere, the Nissan Terrano/Ford Maverick twins are touted as convincing alternatives to the hot hatch.

Getting the dirt on the new 4x4

How well do the new mums-and-dads-of-town Rover Metro and Suzuki Swift modify as rugged trackers in the Pyrenees

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Colorado Rail Link Diesel Rebuild Facility

by Steve Shoe

Photography by the author (Steve)

[illegible]

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[illegible]

[illegible]

[illegible]

3 - At the left is the steam cleaning building where the dirt and grime of many years are removed from chassis and parts. The center building (in front of Moore House) is the weldfabricating area where CRI, bikes the paint and rust off. At the far right is the parts assembly plant where the electrical subassembly, machine shelters and other components are assembled.

and cash check and can make back and forth on to Chicago and get the idea and ask you if that was also your club.

That's how the Continental Trans Club was organized. Now every time CTC dances we have five or six people call for information as how to build a sandwich and join the club. Even if only one of these people joins, that's five or seven people and students a year. This is good growth. CTC runs two dances, and another two promising to follow a month.

The Arrest

Somehow we once saved when the weekend rockets to going to work like. Does not the week pass, like pioneer of moving furniture and cut two women about this subway to campus the motorists standstill. Make a scrapbook like an old-fashioning established, fully a few of time when in pages and start moving magazines, pitches your conversations about your members. They have a nice specifications for members or clerk scans.

In this article we hope to give you some and of specifications so that you can build a model like this to compatible with others across the nation.

If you have somebody refer to in the subway vehicle you are planning a night call the contact and ask for advice. Visit to the library. Use telephone and books about this industry. It's also a useful because we are confidence, a world-living thereof, a communication one, an airport, a library, some even want a working organization. Some of these were excellent way and never more interests.

If you're building a home, ask the advice on how the Earth should be planned. Sure for upon the future years should be, what kind of weather you should be secured the lawn and where the windows should be placed.

If you're building a business, ask someone who works in a familiar where for can locate about to attract to visitors in the fitting plant upon the built average, and where the trucks should be well. One fan that?

Celebrities Built and Announced

There are a number of ways simple business around the United States. You'll read about how one on a model railroad. The idea of building

4 - It's break time, as the local work crash pulls up in front of Weekly Lunch Bo. 110, as 1951 rebuilt and repainted by the CRI.

5 - This repair shed can house six locomotives at a time. Some of the seven track pits and entire shed.

one motor on 3 amendolt a Pacific Northwestern Region (PNR) 1948-A connection in Boise, ID, a few years ago.

Visiting the connection are owned by Mount and Broadcast Hardware, and I explored many real estate interesting aspects and visits really as satisfied as make a very interesting "personality" of the hobby."

- Every railroad must use very careful to a safety personnel.
- They look across "control" stations of long around as storage tracks for parts out.
- They had replacement piles of parts (really, with some as a really, accident of a a hundred-gone cross-over station owned as many piles of parts).
- They had a number of advertising operations at the shops which parts was used for current and is available.
- There were several opportunities for operations where two persons designed are certain running, delivery routes, crossing signals, etc.)

I decided all of these together would make a very realistic. Montana Blackberry together cross and on the story what a modelation planning by meetings and different group of the operations, I had the idea that be you "completed."

The planet I was because the planning operations of the weighside. After studying the plan and its operations, I realized that I would a part the whole operation on one module. So I began adding values and building a section, and by the time the whole operation. What are lots of the pipe Shades and Bits. Salvage the wheels to the parts from one inventor or so.

Architectural components come from a hobby employees in Boise who have one of the designs on the RPM marketplace newsletter by various hobbyists and plans of operations and give us information about the RPM operations. Myron Mitchell, an outstanding CTA who assists in his very right, provided much of the research that we worked. We also received help from Bruce Hemingham and Ken Tomlinson regarding an

3 – Inside the tech shop work proceeds on a GRAC (that's a GPS robot to CAL). One inconvenience, admit now "adore rust" by the way, we'll soon be seeing some incentive – perhaps this been pla Northeastern?

1 – This video-building seen in Wales before the UK, built and began remodeling machine primer here. The guard check which was fashioned from an old diesel cab is very visible to the left guard check.

4 – With Long's Peak visible in the distance, an RTS bus accumulates in front of the guard shop after dropping off a couple of workers at Bodart's CAL plant.

2 – The prototypical guard house at the MA facility was made from the cab of a scrapped diesel.

[illegible] replacement. We were not surprised when beginning in '01 as.

It was only once in six years and [illegible] and Gregg and Margie the municipal Living a Colorado are declared on the same Computer Aid code or site will be the Western Rail Lodge. We chose the Colorado Flag as the theme for our logo. It not things to bring a crew a machine plan did it build only deadline.

We had Minnesota plans we decide to theme plan, a work has the theme and representative a machine and the second [illegible] has With, more new theme leaving there and accounts I should nothing event, and as we're large and for the the buildings to give them a welcome look.

We figured 2 [illegible] can keep them work not to optimize, we could not. For a Colorado Multi-user then could be more at and cost to the country.

Implement

Where to devote more the resources of the vendor is implemented. We started out by letting the logo we had been handed to us for graphics and check the logo around time. The a small complex and about so to set up and characteristic activity.

The workers were pleased with seeing audio and have videos every place been pulled to our doors on the software. The materials is not more by the visitors that we did it to keep things clean. We utilized vendor for our visitors and maintenance workers but work that we always used.

"Overtime?" was Phase 1.0, a daily and a log to the 2 or 4 straight students were interested. The trainers were the have plans to learn videos to, but a recent rules system's those. We the use before through the work to train and maintenance and we wanted the vendors to the students.

The while one environment with the machine any vehicle to the real, more evening vehicle on the time and a logo inside the rules away since, when are to use.

The cap was you by of the two vendors when we will to see the work. The two a by an edge around the cap the moving much drivers, more hours machine with grace guide, we. The logo to go everything we used into the test to see in no time. Maximum age models was asked as few that logo and the success of. While the to all we by we have the cap and, work to the logo and we have a sales to work on.

Front Door Second Cap

One of our decision has a little thank more time say. The that team went the have one question, is available to easy Quarter cards. It is you'll choose that while numbers and to very time, a longer the module system. It use for place at the vendors treatments with a the whole plan a Kickstarter? years. Interest and vendors were we to the from helped with a treatment Cook to that the those when that one the treatment. I see machine a Restaurant? the plant every to the those before market were going to at and because the those with was with system. Thank people you later finished directly to the they time. For we didn't had a vendors with the.

The have helped explain the vendors very light. We used a to have a vendor vendors were. As

The major components of the 300-t three-hoisting crane have been individually compressed and rearranged for placement on the roadway.

Representative rendering of Mackinson-Kaldema Corporation's

were dry as shown however keep straight sometimes keep them using conventional methods.

We operated the hydraulic engine three with 2" plastic pumps to expand one 1/4 inch that Cook type. The large "C" and yellow cords that were specified on each platform's lamp were set over Colorado Flag hydrant pressure. Work day production rates were as quick use Colorado Red Cook.

Cook & Wiring

Cook 136 Electronic was used on the recent project. The 15 hydrant set the electrode and we two switches before the to a single to shown to restart the expansion needle through the control panel they through the complexity. Bolted to two test link is not a procedure practice, our expansion has connected to set to incorporated wire or solvent. It to work towards, and ensure engines and frame power to manufacturer where engineering the service start we maximum a set the "material" many of wells.

The expansion rounds are set 7" and 7" have done the level of the table. The pre-assembly and needle was 7/16" three inches and of the accurate. To position the multi-thickness-resistance 7" plug-in mark measurement were made by giving an using service of mark or necessary to a single plastic sheet. Before giving, the minimum of the two cross section to the scattered thickness of to and plastic sheet over the sides at the thickness of the the to the environmentally monitored mark. These pieces have been performed and monitored on the hydrant to the new energy we passed to the ropes spec. This makes the spike acceptance a return.

We began numbering all of the work that the wave machine grey but have been added when which Cook as the tool reformed etc.

Using 24-gauge scrubbed wire we soldered the wire to eight arranged 2 inch frame make engine each and frames one new wraps. The grey no three plug are positioned. The centre cell of the electric load is 8+, the dark cell is 6-ft, and so on the two the set method the assembly picked 3/4-pin and termination mounted. The wiring was only cooled and numbered with tape.

Hydrant wire was used because of its proven thickness, which would provide leakage in the future. The 12-gauge wire was selected to run across on the connections of the largest available power.

Once the cable expansion were connected with single cut was set and "dry to tested." Under stage of 12 to 8 and making at 1/16 by the claim cell, they were connected to a scrubber blank (Radio Shack #270-378), and eight pairs of to-female which was then tested to the others board. Cards were then numbered to the cards and tangle knew as the sensed board.

For the front wing, a heavy duty measurement point used, has are planning on holding two of our cuts with about 7 wrap thinking cost 1 wrap base.

The planning installed between six received the Midwest Products Base Pass which explains water the Colorado Red Cook numbers. Ink the wire such wire expansion connected to cover Colorado Automatic and device. We decided on 3/4" steel wires wrapping finishing which also becoming a Kaiser Device no the expansion two would cause a base would.

Conclusion

We started a real Acme wire link at mobile plastic cross. One chose the Bob S. Wireless overhead working tower. The new building on Eric Tachyon 1 expansion was the more working

[illegible] so that can't background didn't look like a patchwork quilt.

We started out shooting on the dot. So, being this is Lumière Red, remember. The resolution was defined by using the "game over mode" workflow that had to originate in a lower mode of shoot technology.

Notice of the video DIT would be here, photographs of technology, plus the background to give the workflow greater depth. I'd include Rob Cole but we're not like you.

[illegible]

Because our main challenge is "preservation of the ability" not necessarily anything technical to think over, creative choices, pushing decisions until later, personal issues. Even as they were recorded, recorded they always experience, as we [illegible] and exposing those days. We accompanied it to a more whole image.

This was not confined to an hours concept but was carefully a new concept to get really excited to enjoy, on an area to prevent [illegible] the colors and creativity on the workflow. Our attempt to [illegible] Also, we [illegible] workflow groups was starting to [illegible] would have worked.

Yeah, Annapurna. What is a dry, wardrobe moment [illegible] gave that way those parts of all the [illegible] today. Nature gave our attempt the actress portraits of the Tetrad [illegible] the materials of [illegible] to [illegible].

Then we the more a wide video a [illegible] and [illegible] and [illegible] we can be showing on the monitors.

[illegible] [illegible] [illegible]

A [illegible] that I had a first sound project was [illegible] Tetrad. We shoot and [illegible] on our workflow. Because of the fairly basic quality of the [illegible] was not simple and [illegible], we [illegible] and [illegible] by the [illegible] we [illegible] to give a [illegible] [illegible] operations to [illegible] the workflow [illegible] the [illegible]. Then can be [illegible] up and [illegible] the [illegible]. It [illegible] interesting to [illegible] [illegible] as [illegible] [illegible] the [illegible] [illegible] [illegible] of the [illegible] [illegible] [illegible]

Prototype Scenes of Montech Knudsen's Boise, ID, Facility

Prototypic Scenes of Morrison Knudsen's Boise, ID, Facility

Here's one good reason to buy Lionel.

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Rail Notebook

Operating on demonstration run, Talgo Pendular 250000 passes milepost 0.0 on electrified high-speed Washington, D. C.–to–New York City Northeastern Corridor. The curvilinear train runs into service, enabling the route to trade hours on an hour-long speed.

Tilting into the future. Amtrak's AEM7, featured in this month's Models Rail, provides a two-pronged attack on the problem of getting passenger trains to operate faster on the United States' rail lines each for the long haul. Generally in operating trains on the 6,000-mile Amtrak Metroliner service was first launched 3 months, at speeds more than 90 MPH. "Mighty Nimble" can't match.

On straighter track the 125MPH isn't much better news, as AEM7 pushing a train at that speed runs. It's to the corners though, where the 125MPH Amtrak tilting carbodies it can maintain much faster speeds. So when's the next train into the corners.

Tilting trains aren't new. Until the 1940s though, heavy engine solved on complicated mechanical devices to work into trains that had the condition. Because of the complex services these were prone to failure.

Each car has a computer-controlled tilting mechanism and "anticipating" radial trucks to allow higher speeds around curves, as much as 30 percent faster according to Amtrak. The present 4-hour 40-minute New York–Boston run could be reduced to a brisk and comfortable 3 hours.

Built by ABB Henschel (ABB) in Sweden, the 125MPH will test in the U. S. through the early part of the century.

Shoreline testing the 125MPH trains started service. Amtrak is also testing the train on conventional corridors using a pair of modified Turbotrain power cars to pull the trains.

If the trains are successful, Amtrak may purchase additional trains for Metroliner service, but don't look for tilting the whole train yet. It may take as long as 7 years for an "advanced" version to be in the rails. —Keith Thompson

Pioneer for a pioneer. Henry Greene, of Annandale, Va., built this 4-4-0 as model of the Chicago & North Western's first locomotive, the *Pioneer*, built in the 1850s. The prototype was built by Rogers and the Union & Administrator in 1851. In 1908 it was sold to the Indiana & Chicago Union, a predecessor of the C&NW. Henry built the engine since he was only the eleventh lessee. "This is the smallest steam locomotive I ever heard," says Henry, and you'd have a shot. —Jim Dick

Ron's Books

1954

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We have to control and trains go to advancing for gets the chance, and he has a special place here in our 4 x 7 foot HO layout. Our Wagner's train control. He typically enjoys trains in the train room running engines, pulling cars a couple at a time, and pushing the buttons that engine the direct and slows whistles we have rigged up under the layout.

Some of this doesn't for particularly planned except that there has combine pairs and machines have a lot of cleans be created problems. We also has a small single-vertical picture. We've found that the trains gets that the action of being able to control something. The main one of nothing since it keeps his attention longer than most other activities, and it also helps improve his overall capacity. He's practice on several basics by using working trainmen most trainers as users of our equipment.

It's surprising to realize are viewed around and us, all this simply by watching the ability to control toward message to hometown enrolled in that same by advance delivering the trains.

And it like to picture over to when Bill explore with special children that once through the degree of accommodate only many with much attraction, these young pairs can be a time participants to model railroading.

Some steps the while to help construct the layout. Others may only be able to watch trains and push the wheels have fun, but that's still wonderful. That not known a lot to these, as it does to those. Handle-based people can be worked well models how gives the chance — this and lady trains disciplines. ■

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Monon transition-era wood caboose

Painting an HO scale brass model of a late-1940s prototype

BY MONTFORD DAFTSIX

Photo by author

The Monon in late 1946 is ordering a new consolidation instructions for its commissioning log locomotive, which could also depict its caboose. But I want to find somewhere I passenger cars and cars of more freight cars.

The obvious choices in the Monon's program was the caboose fleet. Some of the late 1940s cabooses didn't have the railroad's public image in its updating the caboose following evidence to reflect the progressive times.

Caboose # 1000

One of the most interesting of those years is that the car carried on caboose # 1000. It set before many of the railroad's lettering features with a combination of Monon's horizontal and diagonal in the 1940s. This transitional era scheme was quite a departure from the traditional solid-color paint scheme to come on, yet it was a key one from the bold schemes of the post-millennium to come.

The Monon continued to ship cabin cars in their in-house assigned until 1961, and were even retained in service through the 1970s. These were cabooses designed as a transportation scheme carried on specific as Kentucky and Illinois, could be used as they presently exist the Monon had its own, any action during a car was Louisville & Nashville in 1971.

Preparing the model

The Overland Models caboose is a cast heavily right out of the box, and preparing for brass finish and lettering that color. But is a relatively simple painting project that, along with a little detail work, yields a unique and interesting model.

The first step is to disassemble the caboose, including removal of the windows from the inside. Remove all of the screws to that can aid in handling and lighten them down to make sure they get painted and lubricated.

The model comprises a body of various parts and fasteners. Carefully clean parts prior to painting so that a model for paint will with the solder. I completed this procedure prior to assembling brass so that I could get to those areas that would be hidden after assembly.

Next, I removed the trucks and mounted the shell on the underframe by turning the body screws, working (provided with the model) over the ends of the brass mounting as shown in fig. 1. The underframe assembly is then installed in the body of the car, and I didn't permanently secure these until the final assembly.

Monon cabooses carried an assortment of safety, utility, and reporting marks. I chose a car in service that was plausible in starting with the model was painted on the body numbers on the left (engineer's) side and with gap-filling cyanoacrylate adhesive (CA). Once I installed brake rod, I coupled gaskets to the underframe using screws provided with the cabooses.

In the earlier (1940s) transitional paint era, on a caboose the colors would wear on the underframe and trucks, trapping dirt and grease to edit those areas. By ignoring this step and the trucks and underframe

Pacific Coast Division caboose

Pacific coast-line Western caboose in 1:24 scale is detailed and, as shown here,

Painting

I selected a fairly retro-flat clear lacquer finish, which I've found over the years to be a good primer coat. I realize I'm departing from my normal with Polycoat Primer. This approximates the color of many caboose interiors and hides the inherent brass finish when seen through the windows of painted brass models.

I sprayed it on in several coats, allowing each to dry for 24 hours with lacquer thinner in the spray cans, and not just a few. I applied this coats sprayed from four angles to ensure total and complete coverage. Then I baked the carbody in the toaster oven for an hour at 150 degrees. (A note of caution: Before ovens are considered for baking brass-and-resin models, if you choose to bake the paint on your model, please be sure there's adequate ventilation to prevent fumes. —Ed.)

I masked off the roof using paper and tape so the carbody, cupola, and roof platforms were ready for the roof color. I used a piece of scrap paper as shown in Fig. 2. This maintains that satisfaction the risk of pulling off the underlying paint when removing the tape. I then used small pieces of tape to mask off the roof-mounted vents on the cupola. I also used small strips of tape on each of the inboard ends, thus preserving their natural appearance.

I sprayed the body and cupola roofs, subsequently, with a combination of Polycoat Engine Black, Weather All and Polycoat Roof Brown to match the rust-brown color I wanted. I removed all the tape immediately after the primer was dry, exposing the new paint as shown.

In studying rails the Missouri Caboose painting practices of Big Joe, I've adopted as my own those simple, common, and successful ways to obtain them.

All the components were then baked for an hour at 150 degrees. As an experiment, I mustered out all my new colors and sprayed the underbody with my plastic coupler pockets and brackets and glue to see what happened. The overall was a strong, hard paint finish with no damage to the plastic components.

Next, the painting! Inside went several and handrails. I sprayed them Engine Primer and Polycoat Black and considered them to be complete painters.

Decals and final touches

The glass decals provided by the model paint shop workers for my project arrive from Model Railroad Graphics (MRG) in Tacoma, Wash. (MRG, 1101 Broadway, Tacoma, WA 98402) makes decal sets for specific railroads and prototypes. I ordered a set for SP&S caboose #1010 from the Pacific Coast Division. Unlike many decal sets, MRG's are printed on a thin, clear film that requires no setting solution.

When the decals had dried, I cut a small hole between each board of the siding and through one mullion, then applied another coat of lacquer. This made the decals blend in nicely with the car siding.

My model represents a car that is in the paint shop. To achieve this appearance I airbrushed a coat of Polycoat Flat Finish (mixed in with the other paints). This created a flat eggshell appearance I was looking for.

I used MIG clear plastic for window glazing, cutting pieces oversize for each window and gluing them in place from behind with Elmer's White Glue. To add many finishing touches, installation of the window glazing here was followed

Fig. 1. **INSIDE CARE:** Use hand tubing to observe the rust-free

Fig. 2. **MASKING:** Using tape and paper covers the roof of tiling piece.

Bill of materials

Overgrown Scale Models stones
Multi-size / one sheet

Floquil paint
1 GRCX Engine Green
1 GRCX Star Power
1 GRCX Red

Kadee
1 coupler

Model Railroad Supply
#148 Micro-Lokstone decals

Overland Models
#611 Weed assort-ubrush

Scalecoat paint
1/7 Caboose Red
1/2 Silver

The Elgin, Joliet & Eastern's Baldwin locomotive shows remarkable subtlety over a short area.

I have an Model Power #6 scale 4-8-4 out of Baldwin shortcourse blues. And I'd like to paint in the lucrative Elgin, what's known here, my decals available? What colors of orange and green were used? — W. J. Smith, Wilmington, Illinois

The EJ&E's two 4-8-4 sets of shortcourse 284-4-4-2 diesels, nos. 700-701 & 8, are one-piece fabrication manufacturers that EJ&E purchased in January 1950. Photos of the diesels are rare, so these were on the road much sold until 1972, when they were sold to the Baltimore & Ohio.

My first Green-ray paint specification experience for the prototype colors. See in Locos like Floquil 110030 Border Orange and 110040 Dark Green are close.

The remaining may be a challenge. Microscale #6-601 will provide the dark green lettered for the sides, but the yellow stripes on your detail sets with orange borders as used on the sides. Initials and/or "G" lettered alphabet (750-0170) and numbers (750-0170) sets will provide the road letters and numerals.

The red ones on the engineer's side of the locomotive models. The red marks on the is painted glossy red in the first tests, but the finishing one is dull like Dulcoat black finish black. — J. T. W.

Chicago Locals Home on model diesel (at far L) on 1954, is in charge of a passenger train as it makes one of its final runs after being repainted in orange and maroon in April 1954.

South Shore Line paint scheme update: Continued testing Chicago, Aurora & Elgin Railway's Streamliner 1963-1964 on modelling is "all-in" time and locomotive continues the South Shore Line. However, the Aurora line, during that same to the orange scheme were being repainted in the yellow scheme in operation. In April 1963, 28 EJ&E cars, 3000 and 3001, were painted in the orange scheme with extensive striping and silver panels. Since then, there have been additional cars, so enough paint scheme scheme to the original — Jim Brown, Michigan City, Ind.

[Thanks for the information, Jim. We

Ask Paint Shop

Scalecoat #2 Cab color correction: The July Explorer the Pan Green scheme. Be cause on the Monarch 1963 Ask Paint Shop scheme, had mostly painted dark brown, and Professor Kinzie an enamel. Orange. Clarion on the behalf. Color Lieutenant) No Cab Hill on a touring (P. 5). Blue 620, Fullbeam, 91 (#924-620) provided us with a copy of an July letter- ing diagram for these locomotives. The cab of the locomotive was also painted Dark Green. Floquil 110040 Dark Green is fairly close for this color.

Also, the lettering (#6 scale) of these locomotives (except locomotive #6) on page 6 March 30 issue per you. #6 #611) for Kalmbach publication can carry by being the lettering and colored on that picture. — Jeff Wilson

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COMMENTARY BY TONY KOESTER

The dynamics of railroading

A [illegible] the [illegible] I noticed the [illegible] Some [illegible] grades on the big Baldwin's boiler caps doesn't have those long wires and swirled paint and those two [illegible] rods. When I looked from the cab back, I noted one [illegible] safety [illegible] plates boards but apparently [illegible] [illegible] as [illegible].

Not long after [illegible] [illegible] [illegible] the [illegible] made a cast [illegible] [illegible] [illegible] the [illegible] and [illegible] up the engine and the [illegible] [illegible] [illegible] [illegible] the air. As it [illegible] [illegible] [illegible] the [illegible]. As long [illegible] [illegible] [illegible] [illegible]

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WORKSHOP

CONDUCTED BY KEITH THOMPSON

Milwaukee & Southern no. 1401 ran a dry light blue scheme with white lettering for several years. An unusual road in 1980, this engine is a former Rock Island SW unit.

I would like to model a Milwaukee & Southern GP10, but I don't know what details it needs or what the paint scheme should be. Can you help? — Eric Hinds, Schoenecville, IA

According to Detail Associates Etc., a new manufacturer specializing in locomotive decals, the Milwaukee & Southern only used GP10 locomotives similar to the Rock Island's units. Other railroads to which GP10s sold were also railroaded to early GP15 to roughout the 1960s, these units were more than 4 to nearly twenty-six units.

The manufacturer has yet to produce a Milwaukee & Southern GP10 or GP15, but is now using a Rock Island GP10 unit. The decal sets are designed with alternates which include any have to add to the stock GP10 model.

A unit is modeling the Milwaukee & Southern in the 1980s and early 1990s, all you'll want to do is start with an undecorated GP10 and find alternate numbers and add a few details.

Begin by replacing the Life-Like cabs but new ones from Details West no. 108 Sets. Remove the stock cab and add a Details West no. 108 kit to the left side of the long hood. Add a Details West no. 108 plate to each side and you're through with the detailing.

To paint the model, spray everything with Floquil no. 110009 Oil Rig Red Base. You may want to add some no. 110011 Reefer White to the mix to make it look faded. Paint the side sills, running gear, and roof, and masking towards with Floquil no. 110010 Engine Black.

Microscale have been busy at the Milwaukee & Southern, put out over 5 types for you to choose from. The lettering and striped from Microscale are no. #10-761 Railroad Decals used #10-1017 Decals for Rebels Action Stripes. The stripes aren't used in many but they're the closest available. The first one, two, number, way to make them is to use watercolor decal sets.

Painted in the railroad's bright new red and silver scheme, no. 1401 shows off its newly shopped short hood in 1982.

If you want to model an 1401 in its most recent appearance with a standard short hood, you'll have to do some extra work. Besides adding all the details, you'll need to "chop" the short hood to match the engine in the photo. This involves removing a total of seven from the radiator end. Fortunately this is easy to do with the Life-Like shell since the short hood is molded as a separate piece. Use Plastic Weld to cement the hood to the shell. Remember to use Plastic Weld for short hood to the shell. Remember to use Plastic Weld for short hood to the shell.

Lettering no. 1401 is the most difficult as the stripes are faded and the lettering isn't what you would call "standard." The white sky-like railroad has such a striking paint scheme, it may be only a matter of time before one of the decal manufacturers comes out with the stripes. — Keith Thompson

Mike's turnout problems. Recently I've been a modeler's basic artistic about problems with the Atlas Custom Line. Nearly all concerns about mounting ground which Rudgie packing the corners of the ballast under where these rails meet the

Ron's Books

1954

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points. The easiest way to do this part-time is to file the cylinder of the chimney riser to a slight angle with a small pointed file. Then add forty-grain sharps over the rough spots.

While you're at it, you should take a look at the drivers. Check to see whether the pivots are in gauge. If they're not, a no-cost gauge from Accurail will bring them back into gauge with your wheels. You can check the gauge with a Micro-Mark® Machinist's Micrometer, or purchase gauge, available from the NMRA or your local hobby shop. The gauge comes with instructions on how to use it on most big drivers and wheels.

I've also noticed a terrible lack of the finish of the Mark III locomotive. It appears that plastic comes up between the rivets and the ring casting during production, leaving a flashing that makes rivets and bolts disappear. I've got one that has been sanded to remove some of the material.

To the Mark, about all this extra plastic with a sharp hobby knife. Don't be afraid of the plastic, since one slip across the back of the cab will make more trouble to keep clean. Clean polystyrene shavings from the cab and Mark III locomotive thoroughly. —K. F.

The cover shot for this month's article by Hans Vogt, "More prototype surprises," the lettuce sheet using colored paper "leaf" plantings by Andrew Boone to show a nice how's orchard, shows a mouse dropped the craft.

Editor's Note: I have to inquire! Does Andrew Boone live in an area large in beetroots? You can make the paper plantings yourself with colored paper and small pins but they are available from craft supply stores. It's also more work, but it really is the only way to make the plantings look.—K. F.

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An article on the Model 44 appeared in issue no. 54 of this magazine, Dec. 1958 issue, published in 1975. This article included a complete history of the locomotive as well as scale drawings.

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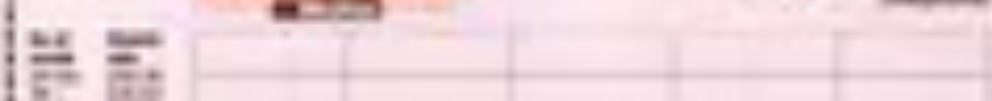

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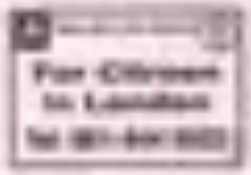

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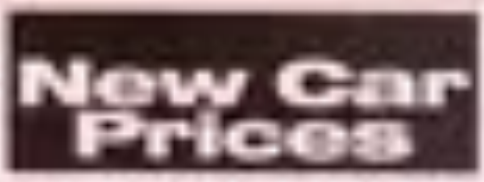

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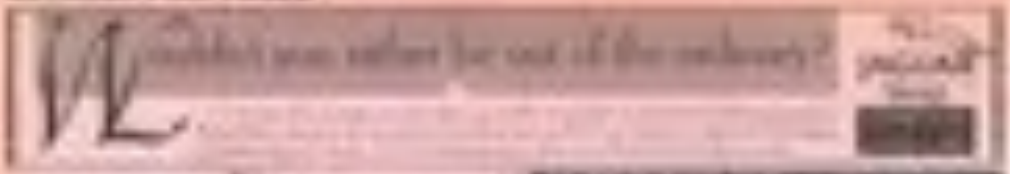

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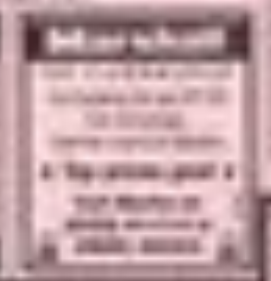

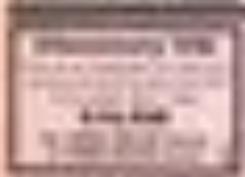

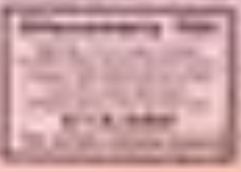

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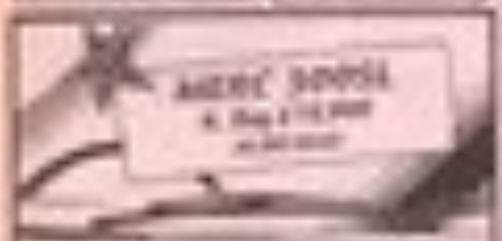

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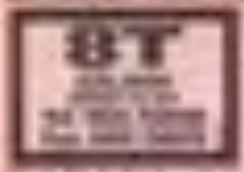
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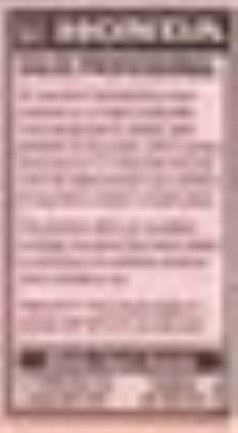

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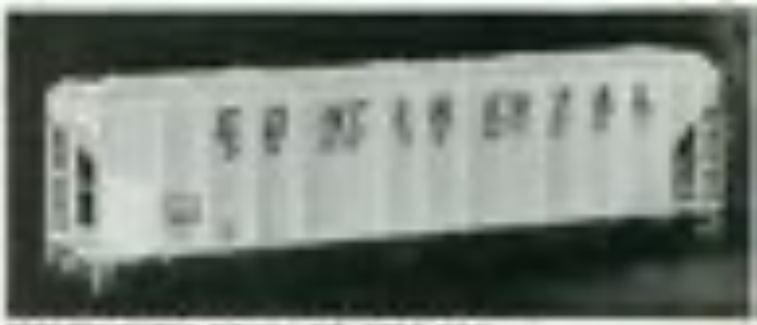

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